

MDC

2020-22 catalog

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The information contained herein is subject to change without notice.

EQUAL ACCESS/EQUAL OPPORTUNITY

Miami Dade College is committed to providing equal access to education and employment opportunities to students, employees, applicants for admission and employment, and to its activities for the general community, in an environment free from harassment or other discriminatory practices based upon sex, race, color, marital status, pregnancy, age, religion, national origin, ethnicity, veteran's status, disability, sexual orientation or genetic information. The College's commitment to equal access and equal opportunity is contained in the District Board of Trustees policies and procedures based on the nondiscrimination provisions of federal and state laws and regulations, including the Civil Rights Acts of 1964, as amended, and 1991; Title IX of the Education Amendments of 1972; Section 504 of the Rehabilitation Act of 1973; the Americans with Disabilities Act Amendments Act of 2008; and the Florida Educational Equity Act (§ 1000.05, F.S.); The Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act (The Clery Act) as amended in 2008; and The Violence Against Women .

In accord with these protections, Miami Dade College provides equal access/equal opportunity in admissions, recruitment, financial assistance, access to course offerings, participation in extracurricular programs and activities, access to and use of facilities, counseling, housing referral, guidance, advising, health services, athletics, employment and retention of personnel and students.

Responsibility for the implementation of the College's commitment to equal access and equal opportunity rests with the College president.

Consult the offices below for assistance or to obtain detailed information on equal access/equal opportunity:

District Administration

Joy C. Ruff
Office of Equal Opportunity Programs/Americans with Disabilities Act (ADA) Coordinator/Title IX Coordinator
Miami Dade College
11011 S.W. 104th St.
Miami, FL 33176-3393
Phone: 305-237-0278; Fax: 305-237-0943

North Campus

Office of the Campus President
11380 N.W. 27th Ave.
Miami, FL 33167-3495

Kendall Campus

Office of the Campus President
11011 S.W. 104th St.
Miami, FL 33176-3393

Wolfson Campus

Office of the Campus President
300 N.E. Second Ave.
Miami, FL 33132-2296

Medical Campus

Office of the Campus President
950 N.W. 20th St.
Miami, FL 33127-4693

Homestead Campus

Office of the Campus President
500 College Terrace
Homestead, FL 33030-6009

Padrón Campus

Office of the Campus President
627 S.W. 27th Ave.
Miami, FL 33135

Hialeah Campus

Office of the Campus President
1780 W. 49th St.
Hialeah, FL 33012-2918

West Campus

Office of the West Campus President
3800 N.W. 115th Ave.
Doral, FL 33178-4856

To obtain additional information about the College, including an Application for Admission/Readmission, contact any campus Admissions and Registration Office or visit the College's website at www.mdc.edu.

Purpose of the Catalog

This Catalog provides information about Miami Dade College's academic programs and student support services. The Catalog contains summaries of College policies for academic areas, degree and certificate requirements, descriptions of support services and course listings. Because the Catalog is produced for a two-year period, it does not necessarily contain all of the current policies and requirements. Prospective students and current students may verify these policies and requirements with an academic advisor.

Faculty and academic advisors provide academic advisement; however, students are responsible for fulfilling graduation requirements. The certificate or degree will be awarded only if all requirements have been met. It is important that students know the policies, requirements and procedures that they are expected to follow during their college career.

Accreditations

Miami Dade College is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award associate and baccalaureate degrees. Questions about the accreditation of Miami Dade College may be directed in writing to the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, GA 30033-4097, by calling (404) 679-4500, or by using information available on SACSCOC's website (www.sacscoc.org).

Additional accreditations include:

- Accreditation Commission for Education in Nursing (ACEN)
- Accreditation Review Commission on Education for the Physician Assistant (ARC-PA)
- American Bar Association, Standing Committee on Paralegals
- American Board of Funeral Service Education, Committee on Accreditation (ABFSE)
- American Dental Association, Commission on Dental Accreditation (CODA)
- American Veterinary Medical Association, Committee on Veterinary Technician Education and Activities (CVTEA)
- Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM)
- Commission on Accreditation for Respiratory Care (CoARC)
- Commission on Accreditation in Physical Therapy Education (CAPTE)
- Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP)
- Commission on Collegiate Nursing Education (CCNE)

- Commission on Opticianry Accreditation (COA) Federal Aviation Administration (FAA)
- Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS)
- Joint Review Committee on Education in Radiologic Technology (JRCERT)
- Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT)
- National Accrediting Agency for Clinical Laboratory Sciences (NAACLS)
- National Association for the Education of Young Children (NAEYC)

Additional approvals include:

- Commission on Accreditation of Allied Health Education Programs (CAAHEP)
- Florida Board of Nursing
- Florida Department of Health, Bureau of Emergency Medical Services
- Florida Department of Law Enforcement, Criminal Justice Standards and Training Commission (CJSTC)
- Florida Real Estate Commission, Department of Business and Professional Regulation - Division of Real Estate

Professional Organizations and Association Memberships

- American Association of Collegiate Registrars and Admissions Officers (AACRAO)
- American Association of Community Colleges (AACCC)
- American Association of Hispanics in Higher Education, Inc. (ACCHHE)
- American Association of State Colleges and Universities (AASCU)
- American Council on Education (ACE)
- Association of American Colleges and Universities (AAC&U)
- Association of Community College Trustees (ACCT)
- Association of Florida Colleges (AFC)
- Association of Governing Boards of Universities and Colleges (AGB)
- Business-Higher Education Forum (BHEF)
- College Consortium for International Studies (CCIS)
- Council for Higher Education Accreditation (CHEA)
- Council of Foreign Relations (CFR)
- EDUCAUSE -Association of Managing and Using Information Technology in Higher Education
- Florida Association of College Test Administrators (FACTA)
- Florida Association of Colleges and Universities (FACU)
- Florida Campus Compact
- Florida College System Activities Association (FCSAA)
- Florida Consortium for International Education (FCIE)
- Fulbright Association
- Global Community College Leadership Network

EQUAL ACCESS/EQUAL OPPORTUNITY

Greater Miami Chamber of Commerce (GMCC)
Hispanic Association of Colleges & Universities (HACU)
National Association for Community College
Entrepreneurship (NACCE)
National Association of College and University Attorneys
(NACUA)
National Association of College and University Business
Officers (NACUBO)
National Association of Cuban American Educators
(NACAE)
National Association of Student Financial Aid
Administrators (NASFAA)
National College Testing Association (NCTA)
National Collegiate Honors Council (NCHC)
National Community College Hispanic Council (NCCHC)
National Institute for Staff and Organizational
Development (NISOD)
South Florida Manufacturers Association (SFMA)
Southern Association of Colleges and Schools
Commission on Colleges (SACSCOC)

Southern Association of Collegiate Registrars and
Admissions Officers (SACRAO)
The College Board

Requests for review of letters of accreditation may
be forwarded to the Office of the Vice Provost for
Academic Affairs or Associate Provost for Academic
Affairs.

Note: In addition to the above, Miami Dade College
administrators, faculty and staff members participate
in numerous other international, national, state and
regional organizations. Additional information regard-
ing professional associations may be obtained from
the College.



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ACADEMIC CALENDAR

2020

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Academic Calendar 2020 - 2022

The Office of the College Registrar Office maintains several calendars, each of which provides details for a separate category of information. The Academic Calendar is published once each semester. It contains important dates for registration, fees, graduation, and other academic deadlines. For more information, please visit Miami Dade College's Academic Calendar at <http://www.mdc.edu/academics/calendar/>.

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ABOUT MIAMI DADE COLLEGE

Miami Dade College (MDC) offers a wide range of programs designed to meet the needs of Greater Miami. The College offers associate and baccalaureate degree options and a wide range of career and technical certificate and specialized programs. MDC currently offers five Bachelor of Applied Science (BAS) degrees and 12 Bachelor of Science (BS) degrees which are academically rigorous and innovative in Business, Education, Entertainment, Health Science, Nursing, Public Safety, and STEM related fields. The Associate in Arts (AA) degree, designed to prepare students for further study at four-year institutions, includes more than 70 pathways leading to the baccalaureate degree. The College also maintains more than 60 transfer agreements with colleges and universities across the state and country, guaranteeing entry for MDC students who meet the entry criteria. With more than 60 areas of study, the Associate in Science (AS) degree, prepares students for direct entry into the workforce. Our graduates take advantage of the College's numerous partnerships with innovative businesses throughout South Florida. In addition to these degrees, the College offers numerous short term career and technical certificate programs which are stackable career ladders towards and associate in science degree as well as courses of study to enhance career knowledge through continuing education.

The Open-Door Policy

Miami Dade College's open-door admissions policy provides educational opportunities to community residents and to national and international applicants. Anyone seeking to benefit from the degree or short-term certificate programs, or from the College's student and community services, is encouraged to enroll. The College

welcomes all students regardless of gender, race, color, marital status, age, religion, national origin, disability, veteran's status, sexual orientation or genetic information.

Admission is a simple process, requiring a completed application, admission application fee and official transcripts of high school or college studies. International applicants have additional entrance requirements based on U.S. immigration rules and baccalaureate degree-seeking applicants



may have additional entrance requirements. Transfer students may receive credit for courses that equate to Miami Dade College courses.

Mission Statement

As democracy's college, Miami Dade College changes lives through accessible, high-quality teaching and learning experiences. The College embraces its responsibility to serve as an economic, cultural and civic leader for the advancement of our diverse global community.

Vision Statement

To be the recognized leader in student learning, achievement and success while enriching our community

Core Values

- An exceptional learning environment that challenges students and empowers them to attain their academic goals
- An international perspective that makes our students civically engaged and globally competitive
- A commitment to evidence-informed decision making and accountability
- Innovation and efficiency that ensure affordability while optimizing educational quality
- An exceptional work environment that engages an

exemplary and diverse workforce

- Quality community partnerships that serve as the foundation for the development of relevant workforce, cultural and civic programs
- Cultural initiatives that capture the richness of Miami-Dade County's multicultural fabric
- Environmental awareness that results in intentional sustainability practices

MDC History

The '60s: Opening Education's Doors

Miami Dade College opened its doors as Dade County Junior College in 1960 amid desegregation and the influx of thousands of Cuban refugees. In year one, 1,428 students entered "Chicken Coop College," nicknamed for the original buildings that were transformed into classrooms. The College was open to any county resident who had graduated from high school. The student body included the seven black students who made Dade County Junior the first integrated junior college in Florida. These students, along with the many Cuban refugees seeking to better their lives, paid a \$5 application fee, but tuition was free to all county residents.

By the mid-'60s, the College was already thinking long range. With nearly 15,000 students attending, the original



North Campus buildings were bursting at the seams. New construction was under way, with an eye toward not only a second campus in Kendall, but a third in downtown Miami. By 1967, the College was the largest institution of higher education in the state of Florida, enrolling 23,341 students. Dade Junior had become the fastest-growing junior college in the nation. It enrolled more freshmen than the University of Florida, Florida State University and the University of South Florida combined.

The '70s: Setting the Standard

In the mid-'70s, the College's guiding philosophy of "access with excellence" was clearly defined. A bold education review reaffirmed the College's open-door policy and toughened academic standards. The project and its goals became the standard for community colleges across the country. K. Patricia Cross, visiting professor at Harvard University's Graduate School of Education, called the College "the most exciting institution of higher education in the country."

The excitement spread to every corner of this changing community. The downtown campus, later to be re-named for one of the College's founders, Mitchell Wolfson, was born in 1970. The Medical Campus was founded in 1977, and bilingual studies became a full-fledged division in 1979, with more than 2,000 students enrolled in outreach centers in the Little Havana area. These centers would soon become the InterAmerican Center, the largest bilingual facility in all of higher education.

The '80s: Maturity and Recognition

By the 1983-84 academic year, the effects of a changing community were reflected at the community college. Thirty percent (nearly 18,000 students) were immigrants, and 46 percent reported that English was not their native language. Almost two-thirds of students enrolled in the College were minorities, and 56 percent were women. Part-time students were common.

In 1984, the New World School of the Arts (NWSA) was conceived. Designed to train future performing and visual artists from high school through the baccalaureate, the school became an educational partnership of Miami Dade College, Miami-Dade County Public Schools and Florida International University, with FIU handing the baton to the University of Florida in 1997. Today, NWSA is recognized as one of the premier arts conservatories in the country, with the work of its graduates gracing venues from New York to Los Angeles.

1984 was also witness to a modest College-sponsored bookfest on Kyriakides Plaza at Wolfson Campus. "Books by the Bay" drew a surprising crowd of 25,000 people over two days. Today, Miami Book Fair is a cultural and academic initiative that promotes reading and writing throughout the year by consistently presenting high quality

literary activities open to all in South Florida. Housed at the Wolfson Campus, Miami Book Fair serves MDC and K-12 students, as well as the larger South Florida community.

Year round programs include many reading and writing initiatives, in addition to the renowned Miami Book Fair, the largest literary gathering in the U.S.

The College's fifth campus, in Homestead, opened in 1985 at the First Baptist Church with 350 students. By 1991, a modern campus facility had been built for South Dade's ever-growing student population.

By the close of the decade, the College's place in education was nationally recognized: The prestigious University of Texas Community College Leadership Program identified the College as the No. 1 community college in America.

The '90s: Ready for the New Economy

College personnel challenged the mindset of the past by initiating comprehensive reforms in academic programs and administrative operations. The College's Education Review revamped the academic core and electives by modernizing the curriculum to meet the needs of a changing society. Progressiveness was not limited to education, as the re-engineering process also brought improved strategies to human resources, maintenance operations and budget formulation. The College's effort to streamline its bureaucracy and contain costs brought a new financial stability, freeing resources for new staff and program development.

The College's Technology Master Plan put the College on the fast-track in academic and administrative computing throughout the 1990s. The College sought to keep pace with the changing economy and workforce, developing strong partnerships throughout business and industry. More than 50 new degree and short-term certificate training programs were developed, all aimed at emerging industries and South Florida's job market. The College developed multimedia classrooms and the Virtual College placed the College on the Internet map, allowing students to take classes online. Recognition soon followed: Yahoo! Internet Life proclaimed MDC "WIRED" and voted the College "second best of all colleges and universities." The College's information technology efforts also gained residence in the Smithsonian's permanent collection with a nomination for the Smithsonian Innovation Award.

The College's sixth campus became a reality in the mid-'90s when InterAmerican Center was granted campus status by the District Board of Trustees and was accredited by the Southern Association of Colleges and Schools.

2000: A New Learning Agenda

The new millennium dawned and MDC breezed through



the Y2K jitters safe and sound in its mission to serve students. The College's "Learning Agenda" laid out the next phase of growth, exploring new learning models and student support programs, as well as campus, faculty and leadership development efforts. As always, students stand at the center of this vision: Their success is the ongoing, top priority of Miami Dade College.

The Honors College offers a scholarly environment that challenges academically gifted and intellectually curious students. In addition to expert teachers and a rich comprehensive curriculum, The Honors College offers students a generous scholarship award, college-wide support services and enrichment opportunities that include attendance and participation at national and regional conferences, internships, corporate coaches, travel study tours, university transfer counseling and an individual educational plan. The successful Honors College graduate will be prepared to transfer to many of the most prestigious colleges and universities in the nation.

The Emerging Technologies Center of the Americas (ETCOTA) is the College's response to the need for a qualified workforce to fill the thousands of new jobs in Information Technology and Telecommunications. ETCOTA is a dynamic, state-of-the-art 40,000 square-foot facility housing 19 multimedia classrooms and labs

equipped with high-end computers, specialized instrumentation equipment and simulation work-stations. Located at Wolfson Campus, the Center also has a 120-seat auditorium and offices for faculty and staff.

With the addition of four-year degrees in 2003, the institution changed its name to Miami Dade College. While the word "community" is no longer in the title, the College remains the "Community's College," committed to the educational needs of individuals and industries throughout South Florida. Baccalaureate degrees are offered in education; public safety management; nursing; electronics engineering; supervision and management; film, television and digital production; and health sciences.

In 2005, MDC received official reaccreditation from the Southern Association of Colleges and Schools (SACS), the regional accreditation body. At 10-year intervals, SACS places higher education institutions under the microscope, and MDC passed the review with flying colors. During the review, MDC introduced "The Math Connection," a five-year program of continuous improvement for math students, and Learning Agenda II, with special emphasis on learning outcomes, assessment and competencies.

In 2006, MDC reached an astonishing milestone, welcoming its 1.5 millionth student. In a community of 2.3 million, MDC's role remains central to educational,



social, cultural and economic growth.

MDC welcomed President George W. Bush for commencement exercises at Kendall Campus. President Bush applauded MDC as “democracy’s college.” Since then, President William Jefferson Clinton and President Barack Obama have delivered commencement addresses at the College. MDC also became the proud steward of the historic Freedom Tower, where many immigrants arrived in the 1960s and 1970s. The building hosted the first U.S. exhibition of the complete etchings of Francisco de Goya and a covenant signing for the College’s 10 Learning Outcomes, attended by Sara Martinez Tucker, the U.S. Under Secretary of Education. These general education outcomes and assessment methods drew national praise and represented MDC’s unique contribution to a new era of liberal learning and the need to assess student learning effectively.

The College continues to contribute to the region’s cultural landscape via world-class programs, including those offered by The Center @ MDC (formerly known as the Florida Center for the Literary Arts) and Art Gallery System, New World School of the Arts and Cultural Affairs Department. The year 2008 celebrated the 25th anniversaries of both Miami International Film Festival and Miami Book Fair International. The New York Times named MDC’s cultural programming among the best in

academia. In 2010, Miami Dade College celebrated its 50th anniversary.

Campuses & Outreach Centers

MDC enrolls more than 170,000 students at its eight campuses and multiple outreach centers throughout Miami-Dade County. While each campus has developed its own distinct identity, the entire College is united around a fundamental mission: providing access to high-quality educational opportunities for all residents of the community.

North

Located on 245 acres in northern Miami-Dade County, this beautifully landscaped campus was the College’s first. It was built in 1960 on land that once hosted a World War II Naval air station. The main academic buildings of the Campus surround a serene lake and lush walking paths. North Campus is a major gateway for students wishing to upgrade skills, complete one-year certificate programs, prepare for licensing exams or complete a bachelor’s degree. North Campus is also recognized for its unique programs. The School of Justice, Public Safety, and Law Studies offers the Bachelor of Applied Science with a major in public safety management and provides

basic training for all police and correctional officers in Miami-Dade County as well as more than half the private security personnel. The Fire Science Program trains all Miami-Dade County firefighters and provides continuing education for municipalities throughout the county and the East Coast. A live fire training facility is the only one of its kind in South Florida.

Additionally, the School offers programs in chemical and watershed management. North Campus also houses the Funeral Services program that trains morticians and funeral service directors, the only program of its kind in southeastern Florida. Those students wishing to pursue careers in film and digital imaging, television, and sound engineering, or in the radio and music business take advantage of the School of Entertainment Technologies. This School operates the cable station MDC-TV, and in 2008 it inaugurated the Televisa Centre for Film and Television Production, a hub for Latin American and Caribbean entertainment industries. North Campus also administers the Carrie P. Meek Entrepreneurial Education Center, which promotes excellence in education, entrepreneurship, and workforce preparation.

In January 2010, MDC celebrated the official opening of the College's state-of-the-art science complex at North Campus. The first of its kind in north Miami-Dade County, the facility will create new educational and career-training opportunities for area residents and beyond. The 90,000 square foot complex features 21 laboratories with media stations, a Palmetum, a rooftop observatory, classrooms, lecture hall, faculty and administrative offices, botanical garden, greenhouse, an outdoor plaza and café.

The new science complex is an invaluable tool for all MDC students who must meet science requirements to graduate. In particular, it will serve as a hands-on training venue for students interested in biotechnology, chemical technology, green and environmental sciences, and advanced manufacturing careers, among many other science, technology, engineering and mathematics (STEM) professions. Training in these areas can lead to an array of jobs, from research technologist to environmental scientist. Another goal is for the complex to become a top regional research facility.

The School of Engineering, Technology, and Design at North Campus launched a Bachelor of Applied Science (B.A.S.) with a major in Film, Television and Digital Production in 2010. Designed to provide students with a seamless, workforce driven baccalaureate degree that will enable them to obtain immediate employment in the field of digital production, thereby meeting South Florida's workforce needs, the B.A.S. also serves those currently in the production workforce who need to update their skills to increase their career opportunities and wages.

Kendall

Kendall Campus, situated on a 185-acre tract of trees and lakes, opened in 1967, and has become home to a wide variety of academic programs and specialized institutes. The campus features 14 buildings equipped with the latest technologies, a wellness center with an Olympic-sized pool and several athletic fields.

Kendall Campus offers a comprehensive range of learning opportunities. Kendall provides students with transfer programs designed to facilitate the move to four-year institutions, programs that enhance and modernize professional and technical skills, and preparatory programs for licensing or certification.

Kendall Campus provides students with academic support services focused on enhancing student learning in science, mathematics and engineering. The Environmental Center is a 10-acre facility on campus that hosts Eco Tours for more than 10,000 schoolchildren each year. The Gourmet Academy is the culinary showpiece of Kendall Campus and offers a variety of noncredit programs and courses to the community. Located west of the main campus, the Landscape Technology Program maintains a large nursery and several greenhouses. One of the additions to the campus is the Earth Sciences Museum and Demonstration Center, which boasts one of the largest collections of geological specimens in the southeastern United States. The Kendall Campus art gallery provides the campus and surrounding community with several exhibitions each year and houses a permanent collection of more than 700 works. Also, award-winning publications such as *Miambiance*, Kendall's literary magazine, highlight students' literary excellence.

Kendall Campus recently introduced a Bachelor of Applied Science (B.A.S.) in Supervision and Management to prepare graduates for leadership roles and positions in a variety of industries. The upper-level coursework includes applied management practices, prepares students for supervisory and management opportunities within their technical field, and affords students the opportunity to demonstrate the application of acquired knowledge, skills and competencies through internships and capstone experiences.

After graduation, students will be prepared to advance to supervisory and managerial positions in a wide variety of industries, including financial services, retail, hospitality, marketing, aviation management, food service, insurance, real estate, office and administration, and sales.

Wolfson

Wolfson Campus opened in 1970 by holding classes in the storefronts of downtown Miami. With the completion of the campus' first permanent facility in 1973, Wolfson Campus catalyzed a downtown renaissance by hosting all



manner of civic and cultural discourse. It is the only comprehensive urban campus in the city. Located within the city's financial, governmental, technological and cultural hubs, Wolfson Campus capitalizes on its unique geographic resource by offering programs in banking/financial services, business, computer technology, paralegal studies, architecture, economics, hospitality management, engineering, the arts, humanities and social sciences.

Wolfson Campus is home to the Emerging Technologies Center of the Americas (ETCOTA), a state-of-the-art, 40,000-square-foot high-tech training facility. It has fast become the leading provider of skilled professionals for the region's emerging technology industries. The campus also houses the New World School of the Arts, a comprehensive high school and college program, recognized as one of the best performing and visual arts schools in the country.

Each year Wolfson Campus hosts Miami Book Fair. This is the nation's largest and finest literary festival, bringing hundreds of renowned authors, publishing houses and hundreds of thousands of fairgoers to the Campus. *The New York Times* calls this Wolfson Campus event the model for all other book fairs.

The School of Computer and Engineering Technologies at Wolfson Campus now offers a Bachelor of Science in Electrical Engineering Technologies. This degree addresses the local workforce need for baccalaureate-level engineers, providing job opportunities for MDC's Associate in Science graduates to earn, at a local institution, a degree that will support higher-paying careers.

In the spring of 2011, MDC inaugurated the Miami Culinary Institute at its new, state-of-the-art, green facilities, training students in the latest sustainable food and energy technologies with unparalleled nutrition and culinary knowledge.

Medical

In 1977, Miami Dade College opened its Medical Campus on 4.3 acres within the city's medical/civic center complex. Along with the other members of this complex (the University of Miami Miller School of Medicine, UM/Jackson Memorial Hospital, Veterans Administration

Hospital and Miami-Dade County Public Health Service), Medical Campus forms the backbone of Miami's health care community. The campus offers specialty disciplines in nursing and allied health, and state-of-the-art technologies that help to ensure that students are prepared in these and other challenging medical careers. The Medical Campus continues to be one of the top producers of nurses in the South Florida area. The Bachelor of Science in Nursing was launched in 2008. More than 20 Allied Health programs are offered, including Physician's Assistant, Opticianry, Emergency Medical Technician, Veterinary Technology, Physical Therapist Assistant, Dental Hygiene and more. Quality medical faculty guide students with support from tutors, labs and the Student Success Center.

Medical Campus launched a Bachelor of Applied Science (B.A.S.) in Health Sciences in 2010. Designed to provide students with entry-level skills specific to the allied health professions and to supplement the workforce-specific skills that are inherent in Miami Dade College's associate degree program, the B.A.S. in Health Sciences also offers students a Physician Assistant Studies option. The B.A.S. curriculum provides an interdisciplinary approach to health care by equipping practitioners with specialized health delivery system and patient management strategies, including medical knowledge and skills, the teaching of multicultural health care clients, leadership and management strategies, and research approaches that address health care issues, and alternative medicine.

Homestead

In 1990, Homestead became the fifth campus of Miami Dade College. It was opened in the historic downtown district of the city of Homestead with the mission to deliver a full range of higher education programs for the Homestead/Florida City communities. In fulfilling its mission, the campus enhances the community's capacity to meet cultural and social needs, in turn fostering a stronger sense of community. This togetherness was very important following the devastation of Hurricane Andrew and the closing of the Homestead Air Force

Base. After Hurricane Andrew, the campus, like the city of Homestead, began to rebuild, adding four new facilities by 1996. In January of 2002, the College opened its Aviation Building, housing a simulator of an airport control tower and runways, as well as classrooms and avionics equipment to support the aviation program. The aviation program also extends to facilities at Miami International Airport and Miami Executive Airport.

Today, Homestead Campus is a modern, six-building complex offering an array of academic programs, including aviation, entertainment technologies, arts and sciences, and nursing. The campus' award-winning structures include a computer courtyard, student learning lab, career center and specialized assessment facility. As the community continues to grow, Homestead Campus will also grow, expanding its horizons to meet the needs of the South Dade community.

Padrón

Padrón Campus is located in the heart of Little Havana, a colorful and lively neighborhood in Miami's historic Latin Quarter. The seed for Padrón Campus was planted in 1972 when the College offered two night courses at the Belen Jesuit Prep School. Sixty students enrolled. By 1979, the program had blossomed into the Wolfson Campus' Division of Bilingual Studies, enrolling 2,000 students.

In the early 1980s, an influx of students from Latin America and the Caribbean led to the addition of day classes and full-time faculty. By 1986, the division had grown to "center" designation, and it moved into a building in Little Havana purchased by the College Foundation. What was then called InterAmerican Center became the largest bilingual learning environment in all of higher education.

With enrollment at 5,500, the College District Board of Trustees petitioned the state of Florida for "campus" status. The request was approved and on March 27, 2001, InterAmerican Campus – its original name – was born. The District Board of Trustees pronounced InterAmerican Campus a full-fledged, full-service campus, the sixth of Miami Dade College.

In May 2019, the campus was renamed the Padrón Campus in honor of the longtime College president, who announced he was stepping down effective August 2019. Today, the campus provides service to students in more than 200 programs. It is also home to the College's School of Education, which offers bachelor's degree programs in secondary mathematics education, exceptional student education, and secondary science education in the areas of biology, chemistry, physics and earth/space science.

Hialeah

Hialeah Campus became MDC's seventh campus, accorded official campus status by the Florida State Board of Education in 2005. The campus serves the Greater Hialeah-Miami Lakes area, offering day and evening classes six days a week. Courses leading to the Associate in Arts and Associate in Science degrees are offered. Educational opportunities are also available through career technical education programs, as well as through courses providing career entry in computer technology, office technology, electronics and early childhood development. Hialeah Campus houses a large and comprehensive English-language training program for speakers of other languages in various instructional formats.

West

The West Campus was approved by the Florida State Board of Education in 2005 and became a designed branch campus of Miami Dade College in July 2017, with the approval of the Southern Association of Colleges and Schools Commission on Colleges. Serving one of the fastest-growing locales in Miami-Dade County, including Doral and surrounding areas, the West Campus offers courses toward the Associate in Arts and Associate in Science degrees. Corporate training programs are also offered at the campus, which opened for classes on March 1, 2006, and promises to be the next exciting learning environment for the greater Miami community.

The Carrie P. Meek Entrepreneurial Education Center

The Carrie P. Meek Entrepreneurial Education Center is an outreach program of the North Campus. It opened its doors on Oct. 4, 1989, in the heart of Liberty City, a predominantly African-American community within the City of Miami. The mission of the Entrepreneurial Education Center is to implement the broader mission of the College while promoting entrepreneurship, business growth and economic revitalization for the local residents of Liberty City and the surrounding communities.

The Entrepreneurial Education Center offers a vast array of college credit and noncredit courses. Students pursue certificate and vocational programs in a number of fields; they participate in seminars and conferences that promote workforce training and business skills and facilitate entrepreneurship and entry into the labor market.

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ADMISSIONS & FINANCIAL AID

Admissions

Admissions Information

In accordance with Manual of Procedure 4000 – Admission Criteria and Guidelines <https://www.mdc.edu/procedures/Chapter4/4000.pdf> and section 1007.263 Florida Statutes, the following requirements have been established for college credit and vocational credit admission to Miami Dade College (MDC).

Apply & Get Admitted by completing the MDC admission application (<http://www.mdc.edu/admissions/>) and paying the \$30 non-refundable application fee. Returning students do not pay the application fee. High school graduates who attended as dual enrollment students need to complete a new application. Get additional details if you're a veteran or international student. Make sure to select a major from our Academic Programs. Your admission to the college remains incomplete until all required official transcripts are submitted.

A. College Readiness and Developmental Education

MDC annually reviews and publishes the Placement Criteria document, which adheres to section 1008.30, Florida Statutes, on common placement testing for public postsecondary education. The Placement Criteria document details all placement testing and related requirements for first time in college, degree seeking students.

B. Admission Application Fees and Waivers

There is a \$30 non-refundable application fee for all new students applying to MDC, except for Dual Enrollment/Early Admission and US active duty members. For International students there is a \$50 non-refundable application fee and Baccalaureate and Health Science Program applicants must pay a \$25 non-refundable application fee. Students who demonstrate financial hardship or fall into one of the categories listed below may request fee waivers. Supporting documentation must be provided for the following:

1. US Veteran or active duty member (appropriate supporting forms must be submitted);
2. Student or family is receiving public assistance (Department of Children and Families (DCF) form must be submitted)
3. Student is living in federally subsidized public housing, a foster home, or experiencing homeless-

ness (Miami Dade County Public School (MDCPS) Project Upstart Participation Letter or City of Miami Homeless Assistance Program Participation Letter must be submitted)

4. Student is a ward of the state or an orphan (Department of Children and Families form must be submitted)

C. Admissions to College Credit Programs for the Associate in Arts, Associate in Science, Associate of Applied Science and College Credit Certificate Programs Applicants who meet any of the following criteria are admissible to the above academic programs:

1. Graduates from any public high school in the United States or territories with a standard diploma, per Section 1007.263 Florida Statute.
2. High school seniors with previously demonstrated competency in college credit postsecondary coursework pursuant to Sections 1007.263 and 1007.271, Florida Statutes. Demonstrated competency will be evaluated on completion of a minimum of twelve college-level credits and a cumulative postsecondary Grade Point Average of 3.0 or higher.
3. Applicants with a Florida public high school withdrawal (completion) code eligible for college credit admission, as defined by the Florida Department of Education.
4. Graduates from nonpublic high schools in the United States and its territories that do not require validation.
5. Anyone awarded a high school equivalency diploma (GED) in the United States and its territories.
6. Homeschooled students with a signed affidavit from their parent or legal guardian stating that the homeschooler completed a Florida home education program, per section 1002.41 Florida Statute.
7. Graduates with the foreign equivalency of a United States high school diploma that meets the admission requirements to a recognized institution of higher education in their home country with original documentation that shows all the requisite seals and apostilles. The College reserves the right to require a certified official English translation if the language used in the documents is not English. Students who do not have the requisite seals and apostilles on the original foreign high school documentation may opt to obtain an official evaluation of their credentials from a National Association of Credential Evaluation Services (NACES) member organization. The list of member organizations may

be found at www.naces.org. Students must present this official evaluation to their campus Admissions and Registration Office. MDC reserves the right to require NACES evaluations for any transcripts in which we are unable to verify the authenticity or legitimacy of the documents provided.

8. International students who meet the admission requirements and require a college credit student visa (F1) must also provide all of the following supplementary admission documents to the International Students Office 90 days prior to the beginning of the term for which the students seek admission:
 - a. Statement of financial resources available to support their educational expenses
 - b. Certificate of health and accident insurance
 - c. Cases that Require Additional Validation

D. Cases that Require Additional Validation

Additional validation is mandatory for applicants whose diploma does not meet the criteria above, and in cases where MDC has reason to believe that the diploma is not valid or was not earned from an entity that provides secondary school education.

In compliance with 34 CFR 668.16 (p), reasons that the high school diploma may not be accepted or may require additional validation include:

1. The issuance of the high school diploma was based only on a test and/or payment of fees.
2. The curriculum consisted exclusively of online/distance education instruction, and the high school is not listed as an accredited institution by the Distance Education Accrediting Commission (DEAC). MDC will accept diplomas from online high schools only if they are accredited by the DEAC. The DEAC maintains a list of accredited institutions that offer high school via distance education; this list is accessible at <https://www.deac.org/Student-Center/Directory-Of-Accredited-Institutions.aspx>.
3. There is conflicting high school information.
4. The high school was previously questioned as being a diploma mill by MDC or other accredited higher education institution.
5. The high school is not listed in the U.S. Department of Education's National Center for Education Statistics (NCES). The list of public high schools is accessible at
6. <http://nces.ed.gov/ccd/schoolsearch/> and the list of private high schools is at <http://nces.ed.gov/surveys/pss/privateschoolsearch/>.
7. The private high school is not listed in the Florida Department of Education's Office of Independent Education and Parental Choice. The list is accessible at

8. <http://www.floridaschoolchoice.org/Information/PrivateSchoolDirectory/>. Inclusion in this database does not imply approval or accreditation by the Florida Department of Education.
9. The high school or its course(s) is identified by the National Collegiate Athletic Association (NCAA) as not accepted for athletic eligibility. NCAA ineligible high schools and/or courses will not be accepted for admission to the College. The NCAA information is accessible at <https://web1.ncaa.org/hsportal/exec/hsAction>.
10. Other evidence provides reason to believe that the diploma is not valid or was not earned from an entity that provides secondary school education.

***Once MDC renders a decision on the validity of a high school diploma, the decision is final and not subject to appeal.**

E. Transfer Students

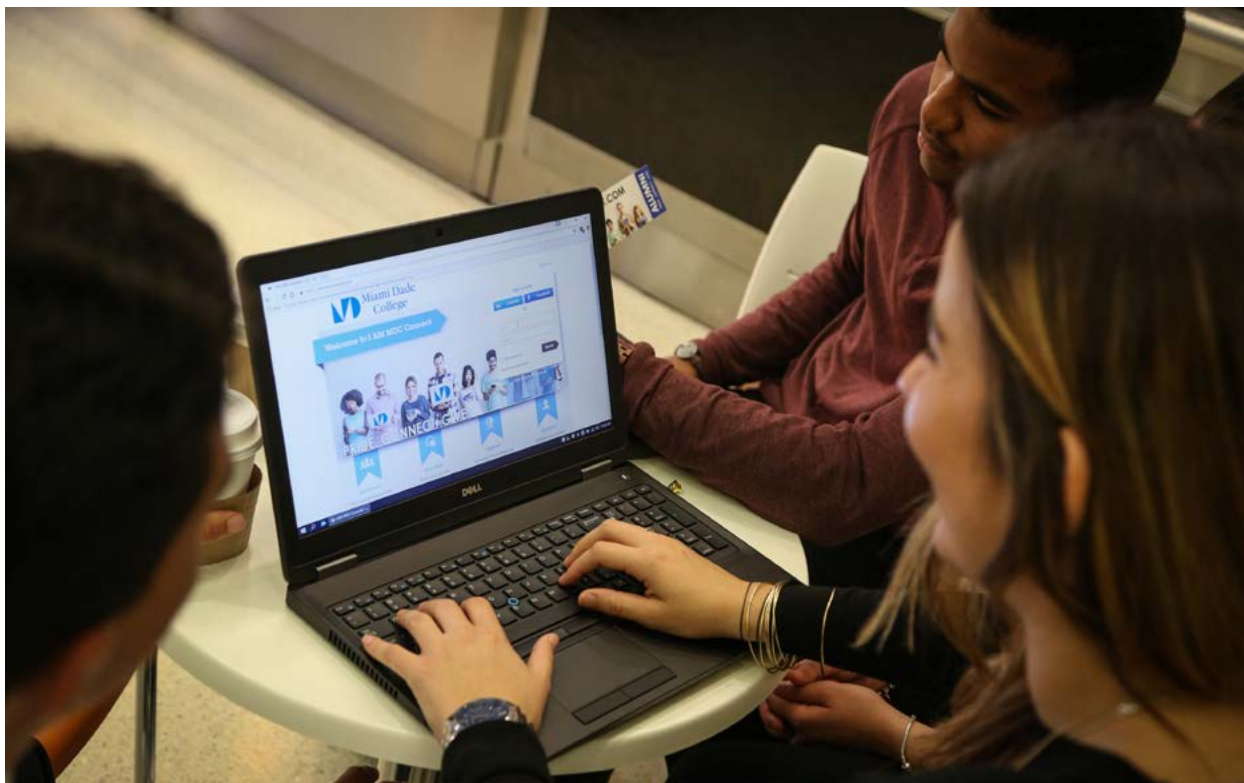
Applicants who are admissible under section II.C and transfer to MDC from other postsecondary institutions must request final, official transcripts from all of those institutions to be sent directly to MDC. Additional requirements are as follows:

1. Students who transfer from U.S. regionally accredited postsecondary institutions(s) with fewer than 12 college-level credits earned with "C" or higher grades must submit proof of valid high school graduation.
2. Students who transfer from U.S. nonregionally accredited postsecondary institution(s) may be admitted based on the high school graduation according to section II.C. Courses taken at nonregionally accredited institutions that adhere to the Florida Statewide Course Numbering System may be accepted.
3. Students who transfer from foreign postsecondary institution(s) approved by the country's Ministry of Education who provide original documentation showing all the requisite seals and apostilles must provide a certified official English translation if the language used in the documents is not English. Students with fewer than 12 college-level credits earned with "C" or higher grades must submit proof of valid high school graduation. MDC reserves the right to require NACES evaluations for any transcripts in which we are unable to verify the authenticity or legitimacy of the documents provided.

***International students who require a college credit student visa (F-1) must also provide supplementary admission documents as noted in II.C.7.**

F. Dual Enrollment and Early Admission

Students' access to dual enrollment and early admission is authorized pursuant to Section 1007.263, Florida



Statutes.

G. Admissions to Baccalaureate Degree Programs

Baccalaureate degree applicants must meet all general and program specific admission requirements and pay a non-refundable \$25 application fee.

H. Admission to Career and Technical Education Certificate Programs

Anyone who meets the requirements under II.C. of this Procedure may be admitted to Career and Technical Education programs as well as the following: Anyone who meets the requirements under II.C. of this Procedure may be admitted to Career and Technical Education programs as well as the following:

1. Applicants who are at least 16 years of age and have left high school prior to completion.
2. Applicants who have been awarded a special diploma, as defined in section 1003.438 Florida Statute or a certificate of completion, as defined in section 1003.428 Florida Statute.
3. International students with a vocational credit student visa (M1) and the supplementary admission documents indicated in II.C.7 above.

I. Recruitment of Students

1. Student recruitment promotes enrollment by presenting the learning options available at MDC. The recruitment team develops and implements activi-

ties consistent with the mission of the College. Activities include providing prospective students, parents, and other members of the community the current and accurate information regarding admission and registration, testing requirements, and program offerings, as well as other resources and related opportunities available at the College.

2. MDC refrains from unfair, deceptive and abusive marketing tactics in the recruitment of all students. In addition, MDC will refrain from using third party lead generators or marketing firms aimed at service members (veterans/military students). MDC will:
 - a. Refrain from providing any commission, bonus, or other incentive payment based directly or indirectly on securing enrollments or federal financial aid, including tuition assistance (TA) for members, to any persons or entities engaged in any student recruiting admission activities, or making decision regarding the award of student financial assistance.
 - b. Ban inducements such as gratuity, favor, discount, entertainment, hospitality, transportation, lodging, meals or other item of monetary value to any individual or entity, or its agents, including third party lead generators or marketing firms. Only salaries paid to employees or

fees paid to contractors in conformity with the applicable laws are allowable for the purpose of securing enrollments of service members (veterans/military students) or obtaining access to TA funds.

J. Other Considerations

1. Certain academic programs have additional program admission requirements. Students need to check with the department that manages the program for more information. A student who is projected to graduate from high school before the scheduled completion date of a postsecondary course may apply, register and pay the required registration, tuition, and fees provided the student meets the provisions in subsection (II)(C)(2) of this procedure.
2. Applicants who have been convicted of a felony or are the subject of an arrest pertaining to a controlled substance and who wish to apply for a program that leads to licensure should confer with the regulatory/licensing agency to determine eligibility for future credentialing and practice. Applicants who are determined to be not eligible for licensing for any reason may apply for admission to that program, but must recognize that program completion may not result in licensure or employment.
3. Miami Dade College has determined that the presence of students officially designated as Sexual Offenders/ Sexual Predators on campus may be disruptive to the College's programs and/or would interfere with the rights and privileges of other students. In accordance with section 1001.64(8) (a) Florida Statute, the College may consider the past actions of any person applying for admission or enrollment and may deny admission or enrollment because of misconduct if determined to be in the best interest of the College. Therefore, MDC reserves the right to deny admission/enrollment to students who are officially designated as Sexual Offenders/ Sexual Predators.
4. MDC reserves the right to deny admission to applicants who have been incarcerated, convicted of a felony, experienced disciplinary problems at another educational institution, or who may pose a threat to the life and/or safety of its students, faculty, staff, community, or guests, as determined by the College administration. In accordance with section 1001.64(8)(a) Florida Statute, the College may consider the past actions of any person applying for admission or enrollment and may deny admission or enrollment because of misconduct if determined to be in the best interest of the College.
5. For cases that require additional validation, this

procedure is applicable to all students applying for admission on or after the revision date of November 8, 2011, regardless of the issue date of the high school diploma.

Admission to Career & Technical Education (CTE) Programs

- A. The following persons are eligible for admission to the CTE programs of Miami Dade College: Graduates from accredited high schools, persons holding a high school equivalency diploma (GED), students who have completed a home education program evidenced by a signed affidavit from their parents or legal guardian stating that the student completed a home education program, or persons at least 16 years of age or older who have left high school prior to completion. Some programs may require high school completion or equivalent as a requirement of admission (consult campus admissions office).
- B. Students enrolling in a CTE program of 450 or more contact hours are required to be tested for basic skills. All those who complete the program must meet basic skills competencies before the CTE is awarded.
- C. A limited number of programs have supplementary admission requirements (consult campus admissions office).
- D. Foreign students who require a student visa (M1) must also provide the supplementary admission documents indicated in 3 above.

How to Apply

Admissions Procedures and Supporting Credentials

- A. The admission application is accessible online at www.mdc.edu/admissions. A \$30 non refundable application fee is charged for processing a student's first application. The application must be submitted prior to enrollment in classes.
- B. International students must submit the application by the published deadlines. See deadlines at: <https://www.mdc.edu/internationalstudents/admission/default.aspx>. The International Student admission application fee is \$50. C. All final, complete, and official domestic transcript(s) must be sent directly from the applicant's high school, college or other postsecondary educational institution to the Transcript Processing Services office at MDC.
- C. High school equivalency diploma or certificate holders should provide the original document and score report to a Campus Admissions and Registration Office if earned prior to 2013; diplomas earned after 2013 must be submitted to the Transcript Processing Services office. In Florida, this certificate is the



General Educational Development Diploma (GED). See the GED section for additional information.

- D.** Students with foreign high school and/or college/university transcripts must bring all final, official and complete academic documents with the appropriate seals and apostilles to a campus Admissions and Registration Office.
- E.** Failure to submit all necessary admissions documents, transcripts or certifications will prevent registration, release of grades, transcripts, and enrollment certification.

Transfer Student Information

A transfer student's transcripts become part of the official student permanent record. Transfer credits are accepted only from regionally accredited colleges and universities or nationally accredited institutions that participate in the Florida Statewide Course Numbering System unless a written agreement between MDC and a specific postsecondary institution has been previously approved. Courses from previous college(s) will be evaluated after the student is admitted to MDC. MDC will determine how many credits, if any, will apply toward a degree. Credit may be granted only for courses in which grades of "D" or better have been earned. The grade of "D" shall transfer and count toward the associate and baccalaureate degrees in the same way as "D" grades obtained by MDC students. See the Standards of

Academic Progress in the "Academic Regulations" section of this catalog.

A high school transcript indicating date of graduation may be required of applicants who transfer with fewer than 12 acceptable college credits.

Students with foreign transcripts that are not in English must have an official certified translation made of their credits and submit this translation to the Admissions and Registration Office.

Transient Student Information

Transient students are enrolled at their "home institution" and are enrolled at MDC for a term. MDC prerequisite and/or corequisite course requirements may apply to course selections. Transient students at Miami Dade College may be required to have official transcript(s) sent directly to Miami Dade College from their previous college(s). Transient students are advised to use Florida's official online student advising system at www.floridashines.org

Non-Degree Applicants

Nondegree applicants are students who wish to take selected college courses without the intent of completing a college credit certificate, associate or baccalaureate degree program. These students must fill out an application for admission and are not required to provide evidence of high school graduation. Many students attend the College

to upgrade their job skills, for transfer credit purposes or for their own personal interest and enjoyment. Nondegree students who wish to enroll in a math or English course or who have earned more than 12 credits as a non-degree student are required to complete the Postsecondary Education Readiness Test (PERT), or provide valid Grade 10 FCAT 2.0 (reading only), ACCUPLACER (CPT), ACT or SAT scores. If, at a later time, these students become associate or baccalaureate degree candidates, regular admissions procedures regarding all transcript(s) requirements will apply.

Special Admissions Categories

In each of the following categories, the regular admissions procedures apply:

- A. Dual Enrollment** – The Dual Enrollment program allows eligible high school, middle school, and home education students in grades 6-12 to simultaneously earn college credit and credit toward a high school diploma. The college credit may be applied toward a postsecondary certificate or degree at a Florida public institution. The Dual Enrollment program provides an opportunity to take challenging courses and accelerate education opportunities. Students who successfully complete dual enrollment courses will save time in obtaining their college degree. They will also save money, as these students are exempt from the payment of registration, tuition and laboratory fees. To enroll in courses through the dual enrollment program, students must demonstrate readiness for college level coursework. Eligibility criteria include both a GPA requirement and passing scores on the appropriate sections of the college placement test. The student's school must grant permission for the student to enroll in these courses, thereby agreeing to accept these college courses to meet high school graduation requirements. Students participating in dual enrollment may begin their studies in any term, provided that they complete the regular admission, advisement and registration procedures. Early admission is a form of dual enrollment through which eligible high school seniors enroll at the college on a fulltime basis. The courses these students take are creditable toward a postsecondary certificate or associate degree and meet the requirements for the student's senior year and high school graduation. Early admission students are required to enroll in a minimum of 24 college credits (12 credits per semester) during their senior year.
- B. Early Admission** – Academically superior high school students may attend Miami Dade College in lieu of their senior year in high school. In addition to the requirements for Dual Enrollment above, the applicant for early admission must prepare and present to a high school counselor a comprehensive educational plan justifying early admission. The College

will accept for screening only those applicants who have received approval from their principal to apply for early admission. The applicant also must have advance approval from the high school principal to apply college credits toward high school graduation. Normally, a minimum of 24 college credits meets the requirements for the student's senior year and high school graduation.

Readmission to the College

Submit an application for readmission and a new residency statement if any of the following apply:

- A.** The student did not enroll during any one of the three preceding terms but was previously enrolled.
- B.** The student attended other colleges or universities since the last time enrolled at MDC. In this case, official transcripts from those institutions will be required for degree-seeking
- C.** students.
- D.** The Florida student residency was completed more than 12 months ago. To be readmitted to the College go to www.mdc.edu/admissions

Developmental Education Courses

With the exception of students who meet the criteria for an exemption from common placement testing and developmental education instruction, the State of Florida requires entry level testing for first time in college (FTIC) degree seeking students and students who have not met college level competency either through the completion of developmental education requirements in the Florida College System or have not been awarded credit for college level course work in the area of deficiency. Students will be placed into developmental education courses in the subjects where scores indicate a need for this instruction, along with a Student Life Skills course (SLS). Enrollment in certain other courses may be restricted until all developmental education courses have been completed.

Students may use adult basic education, adult secondary education or private provider instruction as an alternative to traditional developmental education instruction. A student who elects an alternative is prohibited from enrolling in college level courses until the student scores college ready on all sections of the Common Placement Test. If scores on one or more of the subtests require developmental education placement, students must enroll in at least one developmental education course during their first term.

Students who test into developmental education instruction and subsequently enroll in developmental education instruction must successfully complete the required developmental education studies by the time they have accumulated twelve (12) credits of college

credit coursework or they must maintain continuous enrollment in developmental education course work each semester until the requirements are completed while performing satisfactorily in the degree.

Florida Board of Education rules limit the number of times a student can take a developmental education or credit courses. Enrollment beyond the 100 percent refund deadline is considered an “attempt,” and students can attempt a course only three times.

***Contact Academic Advisement for additional information.**

Admissions to Select College Programs and Programs Leading to Licensure

Admissions to specialized programs, such as those offered by Medical Campus, have specific eligibility requirements due to enrollment limitations imposed by physical facilities, state licensure regulations or other criteria.

Students requesting admissions to such programs will receive specific eligibility requirements from the program. A selection committee determines final approval for placement into these specific programs. The department chair provides notification of admissions into these programs to each individual candidate.

Students who are not selected for a specific program are encouraged to continue their studies in other courses and programs at the College. Advisement offices will assist all such students to determine alternative educational objectives.

A limited number of programs have supplementary admissions requirements. Applicants who have been convicted of a felony and/or subjected to an arrest pertaining to a controlled substance and are applying to a program that leads to licensure may be ineligible for that license. Applicants in this situation should check with the appropriate regulatory/licensing agency to determine whether this would be the case. These students still can be admitted to the program, but need to understand that program completion may not result in licensure or employment. Additionally, there are usually other requirements for licensure, such as physical and psychological criteria, completion of unpaid internships, criminal history verification and other background checks. It is the student’s responsibility to understand and meet these requirements.

General Educational Development (GED) Tests and Diploma

An equivalent to a Florida high school diploma may be obtained by successfully completing the General Educational Development (GED) test. A GED holder is eligible for admission to associate degree programs at the College.

To qualify to take the Florida GED test, individuals



must be at least 16 years old and reside in the state. A 16 or 17 year-old must meet College criteria to be eligible to prepare for and take the GED test.

Preparation for the GED test is available at all MDC campuses. Individuals should contact campus Continuing Education and Professional Development departments for assistance and further information. The GED test covers writing skills, reading skills, social studies, science and mathematics. A fee is charged to take the test battery, and there is an additional charge, although nominal, to retake subtests.

Teacher Certification Information

Before taking courses to meet Teacher Certification requirements, teachers should confirm from their public school district’s certification office or the Florida Department of Education’s Office of Teacher Education, Certification and Staff Development, that the courses in which they wish to enroll meet specific certification requirements.

College credit courses offered by Miami Dade College, may be used for extension, reissuing, other vocational certificates, reinstatement of certificates and for recency of credit. Additionally, information about courses required for general and professional preparation certification is available at the School of Education or campus Academic Advisement offices.

Florida Residency for Tuition Purposes

Miami Dade College policy concerning Florida residency requirements complies with the laws of Florida s. 1009.21, F.S., and Rule 6A10.044, F.A.C., which are reprinted as follows: s. 1009.21, F.S., determination of resident status for tuition purposes (<http://www.mdc.edu>).

edu/admissions/tuition/florida-residency.aspx).

Determination of resident status for tuition purposes:

Students shall be classified as residents or nonresidents for the purpose of assessing tuition in post secondary educational programs offered by charter technical career centers or career centers operated by school districts, in Florida College System institutions, and in state universities.

A. As used in this section, the term:

1. "Dependent child" means any person, whether or not living with his or her parent, who is eligible to be claimed by his or her parent as a dependent under the federal income tax code.
2. "Initial enrollment" means the first day of class at an institution of higher education.
3. "Institution of higher education" means any charter technical career center as defined in s. 1002.34, career center operated by a school district as defined in 1001.44, Florida College System institutions as defined in s. 1000.21(3), or state university as defined in s. 1000.21(4).
4. "Legal resident" or "resident" means a person who has maintained his or her residence in this state for the preceding year, has purchased a home which is occupied by him or her as his or her residence, or has established a domicile in this state pursuant to s. 222.1(5).

5. "Nonresident for tuition purposes" means a person who does not qualify for the in-state tuition rate.
6. "Parent" means either or both parents of a student, any guardian of a student, or any person in a parental relationship to a student.
7. "Resident for tuition purposes" means a person who qualifies as provided in this section for the in-state tuition rate.

B. To qualify as a resident for tuition purposes:

1. A person or, if that person is a dependent child, his or her parent or parents must have established legal residence in this state and must have maintained legal residence in this state for at least 12 consecutive months immediately prior to his or her initial enrollment in an institution of higher education.
2. Every applicant for admission to an institution of higher education shall be required to make a statement as to his or her length of residence in the state and, further, shall establish that his or her presence or, if the applicant is a dependent child, the presence of his or her parent or parents in the state currently is, and during the requisite 12-month qualifying period was, for the purpose of maintaining a bona fide domicile, rather than for the purpose of maintaining a mere temporary residence or abode incident to enrollment in an



institution of higher education

- 2a. However, with respect to a dependent child living with an adult relative other than the child's parent, such child may qualify as a resident for tuition purposes if the adult relative is a legal resident who has maintained legal residence in this state for at least 12 consecutive months immediately before the child's initial enrollment in an institution of higher education, provided the child has resided continuously with such relative for the 3 years immediately before the child's initial enrollment in an institution of higher education, during which time the adult relative has exercised day-to-day care, supervision, and control of the child.
- 2b. The legal residence of a dependent child whose parents are divorced, separated, or otherwise living apart will be deemed to be this state if either parent is a legal resident of this state, regardless of which parent is entitled to claim, and does in fact claim, the minor as a dependent pursuant to federal individual income tax provisions.
3. A dependent child who is a United States citizen may not be denied classification as a resident for tuition purposes based solely upon the immigration status of his or her parent.
 - 3a. An individual shall not be classified as a resident for tuition purposes and, thus, shall not be eligible to receive the in-state tuition rate until he or she has provided such evidence related to legal residence and its duration or, if that individual is a dependent child, evidence of his or her parent's legal residence and its duration, as may be required by law and by officials of the institution of higher education from which he or she seeks the in-state tuition rate.
 - 3b. Except as otherwise provided in this section, evidence of legal residence and its duration shall include clear and convincing documentation that residency in this state was for a minimum of 12 consecutive months prior to a student's initial enrollment in an institution of higher education.
 - 3c. Each institution of higher education shall affirmatively determine that an applicant who has been granted admission to that institution as a Florida resident meets the residency requirements of this section at the time of initial enrollment. The residency determination must be documented by the submission of written or electronic verification that includes two or more of the documents identified in this paragraph. No single piece of evidence shall be conclusive.
4. The documents must include at least one of the following:
 - 4a. A Florida voter's registration card;
 - 4b. A Florida driver's license;
 - 4c. A State of Florida identification card;
 - 4d. A Florida vehicle registration;
 - 4e. Proof of a permanent home in Florida which is occupied as a primary residence by the individual or by the individual's parent if the individual is a dependent child;
 - 4f. Proof of a homestead exemption in Florida;
 - 4g. Transcripts from a Florida high school for multiple years if the Florida high school diploma or high school equivalency diploma was earned within the last 12 months;
 - 4h. Proof of permanent fulltime employment in Florida for at least 30 hours per week for a 12-month period.
5. The documents may include one or more of the following:
 - 5a. A declaration of domicile in Florida;
 - 5b. A Florida professional or occupational license;
 - 5c. Florida incorporation;
 - 5d. A document evidencing family ties in Florida;
 - 5e. Proof of membership in a Florida-based charitable or professional organization;
 - 5f. Any other documentation that supports the student's request for resident status, including, but not limited to, utility bills and proof of 12 consecutive months of payments; a lease agreement and proof of 12 consecutive months of payments; or an official state, federal, or court document evidencing legal ties to Florida.
 - 5g. With respect to a dependent child, the legal residence of the dependent child's parent or parents is prima facie evidence of the dependent child's legal residence, which evidence may be reinforced or rebutted, relative to the age and general circumstances of the dependent child, by the other evidence of legal residence required of or presented by the dependent child. However, the legal residence of a dependent child's parent or parents who are domiciled outside this state is not prima facie evidence of the dependent child's legal residence if that dependent child has lived in this state for 5 consecutive years prior to enrolling or reregistering at the institution of higher education at which resident status for tuition purposes is sought.
6. A person who physically resides in this state may

be classified as a resident for tuition purposes if he or she marries a person who meets the 12-month residency requirement under subsection (2) and who is a legal resident of this state.

- 6a. Except as otherwise provided in this section, a person who is classified as a nonresident for tuition purposes may become eligible for reclassification as a resident for tuition purposes if that person or, if that person is a dependent child, his or her parent presents clear and convincing documentation that supports permanent legal residency in this state for at least 12 consecutive months rather than temporary residency for the purpose of pursuing an education, such as documentation of fulltime permanent employment for the prior 12 months or the purchase of a home in this state and residence therein for the prior 12 months while not enrolled in an institution of higher education.
- 6b. If a person who is a dependent child and his or her parent move to this state while such child is a high school student and the child graduates from a high school in this state, the child may become eligible for reclassification as a resident for tuition purposes when the parent submits evidence that the parent qualifies for permanent residency.
- 6c. If a person who is a dependent child and his or her parent move to this state after such child graduates from high school, the child may become eligible for reclassification as a resident for tuition purposes after the parent submits evidence that he or she has established legal residence in the state and has maintained legal residence in the state for at least 12 consecutive months.
- 6d. A person who is classified as a nonresident for tuition purposes and who marries a legal resident of the state or marries a person who becomes a legal resident of the state may, upon becoming a legal resident of the state, become eligible for reclassification as a resident for tuition purposes upon submitting evidence of his or her own legal residency in the state, evidence of his or her marriage to a person who is a legal resident of the state, and evidence of the spouse's legal residence in the state for at least 12 consecutive months immediately preceding the application for reclassification.
7. A person shall not lose his or her resident status for tuition purposes solely by reason of serving, or, if such person is a dependent child, by reason of his or her parent's or parents' serving, in the Armed Forces outside this state.
8. A person who has been properly classified as a resident for tuition purposes but who, while enrolled in an institution of higher education in this state, loses his or her resident tuition status because the person or, if he or she is a dependent child, the person's parent or parents establish domicile or legal residence elsewhere shall continue to enjoy the instate tuition rate for a statutory grace period, which period shall be measured from the date on which the circumstances arose that culminated in the loss of resident tuition status and shall continue for 12 months. However, if the 12 month grace period ends during a semester or academic term for which such former resident is enrolled, such grace period shall be extended to the end of that semester or academic term.
9. Any person who ceases to be enrolled at or who graduates from an institution of higher education while classified as a resident for tuition purposes and who subsequently abandons his or her domicile in this state shall be permitted to reenroll at an institution of higher education in this state as a resident for tuition purposes without the necessity of meeting the 12 month durational requirement of this section if that person has reestablished his or her domicile in this state within 12 months of such abandonment and continuously maintains the reestablished domicile during the period of enrollment. The benefit of this subsection shall not be accorded more than once to any one person.
10. The following persons shall be classified as residents for tuition purposes:
 - 10a. Active duty members of the Armed Services of the United States residing or stationed in this state, their spouses, and dependent children, and active drilling members of the Florida National Guard;
 - 10b. Active duty members of the Armed Services of the United States and their spouses and dependents attending a Florida College System institution or state university within 50 miles of the military establishment where they are stationed, if such military establishment is within a county contiguous to Florida;
 - 10c. United States citizens living on the Isthmus of Panama, who have completed 12 consecutive months of college work at the Florida State University Panama Canal Branch, and their spouses and dependent children;
 - 10d. Fulltime instructional and administrative personnel employed by state public schools and institutions of higher education and their

- spouses and dependent children;
- 10e. Students from Latin America and the Caribbean who receive scholarships from the federal or state government. Any student classified pursuant to this paragraph shall attend, on a fulltime basis, a Florida institution of higher education;
 - 10f. Southern Regional Education Board's Academic Common Market graduate students attending Florida's state universities;
 - 10g. Fulltime employees of state agencies or political subdivisions of the state when the student fees are paid by the state agency or political subdivision for the purpose of job-related law enforcement or corrections training;
 - 10h. McKnight Doctoral Fellows and Finalists who are United States citizens;
 - 10i. United States citizens living outside the United States who are teaching at a Department of Defense Dependent School or in an American International School and who enroll in a graduate level education program which leads to a Florida teaching certificate;
 - 10j. Active duty members of the Canadian military residing or stationed in this state under the North American Air Defense (NORAD) agreement, and their spouses and dependent children, attending a Florida College System institution or state university within 50 miles of the military establishment where they are stationed;
 - 10k. Active duty members of a foreign nation's military who are serving as liaison officers and are residing or stationed in this state, and their spouses and dependent children, attending a Florida College System institution or state university within 50 miles of the military establishment where the foreign liaison officer is stationed.
11. Once a student has been classified as a resident for tuition purposes, an institution of higher education to which the student transfers is not required to reevaluate the classification unless inconsistent information suggests that an erroneous classification was made or the student's situation has changed. However, the student must have attended the institution making the initial classification within the prior 12 months, and the residency classification must be noted on the student's transcript. The Higher Education Coordinating Council shall consider issues related to residency determinations and make recommendations relating to efficiency and effectiveness of current law.
 12. Each institution of higher education shall establish



a residency appeal committee comprised of at least three members to consider student appeals of residency determinations, in accordance with the institution's official appeal process. The residency appeal committee must render to the student the final residency determination in writing. The institution must advise the student of the reasons for the determination.

13. The State Board of Education and the Board of Governors shall adopt rules to implement this section.

6A - 10.044 Residency for Tuition Purposes

The purpose of this rule is to establish consistent policies for the classification of students as residents for tuition purposes in accordance with criteria set forth in Section 1009.21, F.S.

- A.** For Initial Determination of Residency: Each student shall submit Form FRD1 (<https://adfs.mdc.edu/adfs/ls/>), Florida Residency Declaration for Tuition Purposes to the institution making a residency determination for tuition purposes, electronically or in any other format required or authorized by the institution, and the documentation required by the institution to establish Florida residency for tuition purposes. Verification of whether the student is a dependent child as defined in Section 1009.21(1)(a), F.S., shall be satisfied if the parent declares on the Florida Residency Declaration that the student is eligible to be claimed as a dependent by the parent under the federal income tax code. Form FRD1 is incorporated

by reference and made a part of this rule to become effective December 2015. A copy of Form FRD1 may be obtained by contacting the Division of Florida Colleges, 325 West Gaines Street, Tallahassee, Florida 32399.

1. A dependent student who attended a Florida high school for a minimum of three (3) consecutive academic years immediately preceding his or her initial enrollment in an institution of higher education and graduated from a Florida high school or earned a State of Florida High School Diploma as authorized under Rule 6A6.0201, F.A.C., within the last twelve (12) months may use their high school transcript or the official transcript for the State of Florida High School Diplomas evidence of Florida residency. At least one (1) additional document identified in Section 1009.21(3)(c)2., F.S., must be presented evidencing parental legal residence.
2. If a declaration of domicile, pursuant to Section 222.17, F.S., is being used as one of the documents to establish residency for tuition purposes, the date that an applicant shall be deemed as establishing residency for tuition purposes shall be twelve

(12) months hence from the date that the Clerk of Circuit Court notes the declaration was sworn and subscribed to them. Nothing in this subsection shall prevent the use of additional documentation as evidence that legal residency was established by other means pursuant to Section 1009.21(1)(c), F.S., as of a date earlier than that established by the Declaration of Domicile.

- B.** For Residency Reclassification Determination: A student who is classified as a nonresident for tuition purposes may become eligible for reclassification as a resident for tuition purposes by presenting a minimum of three (3) documents identified in Section 1009.21(3)(c)2., F.S., that convincingly demonstrate the establishment of permanent legal residence in Florida other than for the sole purpose of pursuing a postsecondary education. Documentation must demonstrate that the student or, if the student is a dependent, his or her parent, has maintained legal residence in Florida for at least twelve (12) consecutive months immediately prior to the first day of classes for the term for which residency reclassification is sought, except as otherwise provided in Section 1009.21, F.S.
- C.** The burden of providing clear and convincing documentation that justifies the institution's classification of a student as a resident for tuition purposes rests with the student or, if the student is a dependent, his or her parent. For documentation to be "clear and convincing," it must be credible, trustworthy, and sufficient to persuade the institution that the student or, if that student is a dependent, his or her parent has established legal residency in Florida that is not solely for the purpose of pursuing an education and has relinquished residency in any other state for at least twelve (12) consecutive months prior to classification. Each institution of higher education may establish submission deadlines for all documentation that will be used to determine residency for tuition purposes.
- D.** A nonUnited States citizen may be eligible to establish residency for tuition purposes if evidence is presented verifying that he or she has legal status in the United States, has met the residency requirements of Section 1009.21, F.S., and the person is one of the following:
 1. A foreign national in a nonimmigrant visa classification that grants the person the legal ability to establish and maintain a bona fide domicile in the United States.
 - a. The following visa categories grant the person the legal ability to establish and maintain a bona fide domicile in the United States: A, E, G, H1B, H1C, I, K, L, N, NATO 17, O1, R, S, T, U, and V.
 - b. The following visa categories do not grant the person the legal ability to establish and maintain a bona fide domicile in the United States: B,



C, D, F, H2, H3, M, P, Q, and TN. J visa holders are not eligible to establish residency for tuition purposes except as provided in Section 1009.21(10), F.S.

2. A permanent resident alien, parolee, asylee, Cuban/Haitian entrant, or other qualified alien.
3. Pursuant to Section 1009.21(2) (d), F.S., a dependent student who is a U.S. citizen may not be denied classification as a resident for tuition purposes based solely upon the immigration status of the parent.

E. Each institution's official residency appeal process established pursuant to Section 1009.21(12), F.S., shall be in writing and prominently displayed on the institution's website.

International Student Admissions

Admission – Miami Dade College is authorized under United States Federal Law, Immigration and Nationality Act, §(101)(a)(15) (F or M) to enroll nonimmigrant alien students. In addition to following the regular admission procedures, international students are required to provide English language placement test scores, such as TOEFL if a non-native speaker, proof of mandatory health insurance coverage, and official bank letter of financial resources to support education costs.

Registration and placement into available courses and programs is dependent on English language proficiency, advisement and counseling, assessment/placement testing and course or program requirements. Academic transcript(s) of secondary school, college, university, technical and other post-secondary schools attended must be certified as official. Transcript(s) in languages other than English must include official certified English translations, authentic verifying statements and signatures.

Deadlines – International applicants should apply at least three months prior to enrollment at the College. International mail, transcript verifications, international money transfers, consular appointments, travel and housing arrangements and advisement/testing requirements all take a great deal of time and may cause delays.

Applications for admission, including all admissions credentials and TOEFL test scores (if available), must be received at least 90 days prior to the start of the term in which the applicant plans to enroll. The Test of English as a Foreign Language (TOEFL) is usually administered several times each year at centers in most countries of the world. Information and application forms for TOEFL may be obtained from international centers, by writing to TOEFL, Box 899, Princeton, NJ 08541, USA, or by visiting their website at www.toefl.org.

Deadlines for International Student Admissions

Spring Term.....Oct. 2

Summer Term.....Feb. 15

Fall Term.....May 26

Readmission – Readmission to the College for the international student requires submitting a new application for admission, new official transcripts of post-secondary education attempted since last attendance at Miami Dade College, official bank letter of financial resources to support education costs and a letter explaining the circumstances requiring readmission. Transcript(s) in languages other than English shall include official certified English translations, authentic verifying statements and signatures provided by members of the National Association of Credential Evaluation Services (NACES) <http://www.naces.org>.

English Language Requirements – Miami Dade College courses are taught in the English language. The College will provide English-language training for students who have insufficient English language skills.

English-language test scores determine placement into college courses. Students with TOEFL scores (or an equivalent score on other standardized tests) of 550 (213 on the computerized version or 79-80 on the Internet-based version) or higher are eligible to take the Basic Skills Assessment Test to determine placement in courses leading to an associate degree. Alternative placement tests will be administered to students without TOEFL scores or with scores below 550 (213 on the computerized version or 79-80 on the Internet-based version). Students requiring English-language training may need to attend additional semesters at the College in order to complete all associate degree requirements.

Financial Requirements – All international students must have sufficient funds to pay full college matriculation and nonresident fees, textbooks, living expenses, transportation expenses, health insurance coverage and other incidental expenses while attending college in the United States.

Financial requirements are included with the application for admissions form. Documentary evidence of means of financial support must be provided to the College to be issued a Certificate of Eligibility (SEVIS I-20). This evidence is also required by the American Embassy or Consulate when applying for a student visa to enter the United States. Students must have these funds available when they register for classes each term. College financial aid is not available to students on visa. See the "Fees" section in this catalog for details concerning matriculation, non-resident and other fee requirements.

Employment – Visa students in the United States are not allowed to be employed outside the College, unless permission has been granted by the United States Citizenship and Immigration Services (USCIS). On-campus employment may be authorized by the International Student Services advisors.

Health and Accident Insurance Certificate – Prior to registration, international students must purchase the

mandatory health insurance policy available courses in the International Student Services Office. This insurance coverage must continue for the entire period of enrollment at the College.

Duration of Status – International students on a visa are admitted to the United States for the entire time estimated for them to complete their approved program of study as indicated on the SEVIS I-20. Students must fulfill the following conditions to maintain Duration of Status: pursue a full course of study at the educational institution they are authorized to attend, make normal progress, keep a current passport that is valid for at least six months, maintain a valid SEVIS I-20 and not accept off-campus employment without USCIS approval.

Arrival in Miami – International students should arrive in Miami approximately 30 days before the beginning of the first term of enrollment based upon the program start date on the I-20. Students need the time to obtain housing, provide a local address to the College, participate in new student orientation, take English-language and placement assessment tests, obtain advisement and counseling and register for courses.

Housing in the Community – Miami Dade College does not provide or supervise student housing. Each college campus has an International Student Advisor to assist students to locate housing. International students must bring sufficient funds to pay three months' rent in advance (first and last month's rent, plus a security deposit equal to one month's rent). The estimated expense information provided with the application for admission form provides important details.

Transportation – International students must provide their own transportation or use public transportation (buses or rail) to travel between home and the campus(es).

School Transfer – Completion of a degree program at the designated educational institution is recommended. International students who wish to transfer to another school must officially do so by requesting a release of their SEVIS record to the school they wish to transfer to and by providing an admission letter. That institution will notify Immigration of the student's school transfer. A student who transfers to a different school without completing this process is considered to be out of status.

Passport Validity – International students on a visa must have and maintain a current passport valid for a period of not less than six (6) months into the future. It is the student's responsibility to meet this requirement.

Full-Time Enrollment – International students are required by USCIS regulations to be enrolled full-time. Students should make satisfactory progress in their approved program each term, otherwise the continuation of study on an International Student Visa may be jeopardized and the Certificate of Eligibility (SEVIS

I-20) rescinded. See Standards of Academic Progress in "Academic Regulations" section.

United States Department of Homeland Security Laws and Regulations – It is the student's responsibility to comply with all non-immigrant alien requirements as stated under the United States statutes I.N.A. 101(a) (15) (F); I.N.A. 214(m); IIRIRA 641. The College is required to report to the Department of Homeland Security international students who:

1. Do not register at the College by the first day of the semester.
2. Do not carry a full course of studies.
3. Do not attend classes to the extent normally required.
4. Become employed without authorization.
5. Terminate their attendance at the College.

Visa Student Advisement – Advisors are available at each campus to advise international students concerning academic programs and course objectives. Students on an International Visa should contact the International Student Services advisor each term for a review of the student's progress and for the updates and compliance of immigration regulations.

Admission to Continuing Education (Non-College Credit) Programs and Courses

Miami Dade College, through its Continuing Education Program, offers students opportunities for enrollment in Continuing Workforce Education Training and recreation and leisure courses.

Admission requirements are established by the nature of the particular program or course. A student who plans to register only for continuing education non-college credit courses need not apply for regular College admission.

- A. Continuing Workforce Education Courses** – These courses are for those students who have had prior employment in jobs related to the enrolled course or are presently employed in a career related to the Continuing Workforce Education course. Students enroll in the courses to upgrade their current skills, for re-employment purposes or to enhance their current employability. For purposes of state certification or registration and updating to meet various professional organization requirements, the College student registration system allows for the award of Continuing Education Units (CEUs) on the student's transcript. These units may be awarded when a Continuing Workforce Education course is completed and the course has been designated for the award of CEUs. Ten contact hours of classroom instruction equal one CEU.
- B. Recreation and Leisure Courses** – These non-credit courses are self-supporting with the total program

costs being paid by the students who are enrolled. There are no state or College funds provided to support these activities. The College offers these courses on demand from students and the community, as space is available. The range of activities and courses are unlimited and are determined by the students enrolled. For further information please consult the Web site at www.mdc.edu/ce

Fees and Refunds

Fees are contingent upon approval of the District Board of Trustees and are subject to change. Special fees may also apply. Important note: Tuition and fee rates are determined annually by state and Board of Trustee processes. The best way to determine current tuition and fee rates is to check on the Miami Dade College Web site, www.mdc.edu, or to check at the Admissions & Registration Office at any MDC campus. The fees listed below are an example – for planning purposes only – of rates for the 2020-21 year only.

A. Registration Fees 2020-21 – College Credit Courses

1. Florida Residents* Matriculation
Total: \$118.22 per credit
2. Non-Florida Residents* Matriculation
Total: \$402.51 per credit

B. Registration Fees 2020-21 – Baccalaureate Courses

1. Florida Residents*
Total: \$128.89 per credit
2. Non-Florida Residents*
Total: \$535.97 per credit

C. Registration Fees 2020-21 – Career and Technical Education Courses

1. Florida Residents* Matriculation
Total: \$91.08 per vocational credit (Special fees may also apply)
2. Non-Florida Residents*
Total: \$355.31 per vocational credit

*See Florida Residency for Tuition Purposes section for definitions. Note: Fees are subject to change.

D. Special Fees and Charges

Special Registration Fees:

Some courses carry special fees in addition to the regular registration fees. Special fees in music courses that offer private lessons range from \$60 to \$300.

1. **\$30 Admission Application Processing Fee:**
All new college credit students are assessed a \$30 non-refundable admission application processing fee. This fee must be paid when you submit the application.
2. **\$25 Bachelor's Degree In-Program Admission Application Processing Fee:**
All students admitted to an in-program Bachelor's degree are assessed a \$25 non-refundable admis-



sion application processing fee.

3. **\$50 International Student Admission Application Processing Fee:**

All new international students are assessed a \$50 non-refundable admission application processing fee.

4. **\$15 Per Credit - MDC Online Fee:**

MDC Online classes have a distance learning fee of \$15 per credit. (i.e. \$45 for a 3-credit course). To comply with federal requirements, the MDC Online uses secure login and password to verify the identity of online students. There are no additional student charges associated with verification of student identification.

5. **Resident Students / Non-Resident Students:**

Review information about Florida Residency for Tuition Purposes online (<https://www.mdc.edu/admissions/tuition/florida-residency.aspx>).

6. **Full Cost of Instruction:**

Out-of-State fee charged for students repeating courses more than allowed by state law (This is on a third or subsequent attempt).

7. **Examination Fee:**

A \$30 per credit nonrefundable fee is charged for institutional credit by exam.

E. Registration Fees – Continuing Education & Professional Development and Non-Credit Courses

1. Continuing Workforce Education (CWE) – Fees are variable and calculated to cover the cost of the course.
2. Recreation and Leisure Courses – Fees are charged to cover all expenses for providing the course.
3. Adult Education Courses, which are considered

Adult Basic Ed, Adult High School, GED and VPI course fees:

- a. \$31.50 per term for In-State Residency
- b. \$126 per term for Out-of-State Residency

Note: All fees are subject to change without notice.

Refunds of matriculation and tuition fees are made only if official drop or withdrawal cards are turned in at the campus Admissions and Registration Office by the published deadlines (see Academic Calendar), or if you drop via the web (and the drop is confirmed) by the deadline. If the student withdraws from the College as a result of administrative action or for the convenience of the College, except for disciplinary reasons, the student is entitled to a full refund of matriculation and tuition fees. If the student is dropped from a class due to cancellation of that class, the student is entitled to a full refund of matriculation and tuition fees.

If the student is withdrawn from a course or courses for disciplinary reasons, the student is not entitled to a refund of matriculation, tuition or special fees.

The admissions application fees (for credit, bachelor's, and international student admissions) and late registration fees are not refundable.

Refunds for payments made with cash/checks will be refunded via the MDC One Card. Payments made with Visa/MasterCard/American Express will be refunded to the credit card account

Fee Policy for Repeated Courses

Sections 1009.28 and 1009.285, Florida Statute require the assessment of fees for community college students who repeat a course due to withdrawal or failure. The fee for a third attempt of the same course is equal to 100 percent of the cost of instruction. Since state law prescribes student fees to equal 25 percent of the cost of instruction, the fee for a repeated course is approximately four times that of an initial attempt.

Sections 1009.28 and 1009.285, Florida Statute and College policy allow one-time exceptions to the increased fees for courses. Students assessed such a fee should consult an advisor for more information (<http://www.mdc.edu/smart/documents/3rd-Attempt-Form-Extenuating-Circumstances.pdf>).

Excess Hours Advisory

Section 1009.286, Florida Statutes, establishes an "excess hour" surcharge for a student seeking a baccalaureate degree at a state university. It is critical that students, including those entering Florida colleges, are aware of the potential for additional course fees. "Excess hours" are defined as hours that go beyond 120% of the hours required for a baccalaureate degree program. For example, if the length of the program is 120 credit hours, the student

may be subject to an excess hour surcharge for any credits attempted beyond 144 credit hours (120% x 120).

All students whose educational plan may include earning a baccalaureate degree should make every effort to enroll in and successfully complete those courses that are required for their intended major on their first attempt. Florida college students intending to transfer to a state university should identify a major or "transfer program" early and be advised of admission requirements for that program, including the approved common prerequisites. Course withdrawals and/or repeats, as well as enrollment in courses nonessential to the intended major, may contribute to a potential excess hours surcharge.

Per Section 1009.286(5), Florida Statute, it is recommended that students who intend to earn credit hours at the institution in excess of the credit hours required for baccalaureate degrees in which students are enrolled meet with their academic advisor.

Refund Policy

- Refunds of tuition and fees are made only if official drop or withdrawal cards are turned in at the campus Admissions and Registration Office by the published deadlines (see Academic Calendar), or if you drop via the web (and the drop is confirmed) by the deadline.
- If the student withdraws from the College as a result of administrative action or for the convenience of the College, except for disciplinary reasons, the student is entitled to a full refund of tuition and fees.
- If the student is dropped from a class due to cancellation of that class, the student is entitled to a full refund of tuition and fees.
- If the student is withdrawn from a course or courses for disciplinary reasons, the student is not entitled to a refund of tuition and fees.
- If the student does not utilize the College parking facility and a parking decal is not obtained, the college will refund the term parking fees after the specified term.
- The admissions application fees (for credit, bachelor's, and international student admissions) and late registration fees are not refundable.
- Refunds for payments made with cash/checks/wire transfers will be refunded via Bank Mobile.
- Debit card payment made at the Bursar's office are refunded via check (USPS mail).
- Payments made with Visa/MasterCard/American Express/Discover will be refunded to the credit card account. The Credit Card Service fee 2.0% is non-refundable.
- Tuition payments made via Third Party agency will be refunded based on the conditions of the Third Party agency*.

For a term student with this number of weeks	Student has this many class days to make an official withdrawal to receive a 100 percent refund.
1-3	1
4-5	2
6-10	3
11-14	4
15-16	5
17-20	6
21-23	7
24-26	8
27-29	9
30-32	10

A procedure exists for handling specified exceptions to the refund policy. See the “Petitions Procedure” in the Students’ Rights and Responsibilities Handbook (<https://www.mdc.edu/rightsandresponsibilities/docs/College-Wide-Student-Petitions.pdf>).

F. Refund Deadlines – Continuing Education & Professional Development Courses

For one-day courses and workshops, the student must have paid in full and must make an official withdrawal at least one day prior to the day of class. For courses meeting for two or more days, the student must have paid in full and must make an official withdrawal at least one day prior to the second class meeting.

A procedure exists for handling specified exceptions



to the refund policy. Students should see the Continuing Education chairperson on their campus.

Payment Policy

- A.** All fees are due and payable in full by the due date posted on the fee invoice. Fees and charges are subject to change without notice. Cash is not to be sent by mail.
- B.** Payment of Fees by Check - Checks may be remitted to Miami Dade College for payment of fees owed. Check payments are also accepted via the MDC Web page. All checks accepted in payment for fees must be drawn on a United States bank and must be payable to the College. If a student submits a check exceeding the amount owed to the College, he or she will not get cash back. The College will issue the refund through Bank Mobile. (<https://www.refundselection.com/refundselection/#/welcome/continue>).
- C.** Payment by Credit Card - Miami Dade College will accept American Express, Discover, MasterCard and Visa. There is a 2.0% service fee on each credit card transaction made to the college. Credit card payments can be made over the telephone, and via the MDC Web page, www.mdc.edu.
- D.** Payment by an Employer, Company or Other Agency - Miami Dade College accepts payment for tuition and fees from employer, companies and other agencies.
- E.** Payment Via Wire Transfer by International Students – Prospective and current international students whoseF. Payment Via Payment Plan - The Nelnet Payment Plan is available to students who need an option for paying tuition and fees. There is a \$40 per semester sign-up fee for using the Nelnet Payment Plan. For more information, please visit MDC's Nelnet Payment page (<https://www.mdc.edu/costs/payment-plan.aspx>).
- F. G.** Payment Via Florida Pre-Paid Tuition Program -The Florida Pre-Paid Tuition Program covers only defined registration, tuition, scholarship and capital improvement fees. Students are required to pay any special fees and other local service fees, which include student service fees, parking fees and technology fees. Students may submit a copy of their Florida Prepaid recipient card or letter to the Admissions office to help establish Florida Residency for Tuition Purposes. For further information, contact Student Financial Services.

Florida Pre-Paid Tuition Program

The Florida Pre-Paid Tuition Program covers only defined matriculation, scholarship and capital improvement fees. Students are required to pay any special fees and other local service fees, which include student service fees and technology fees.

Students may submit a copy of their Florida Prepaid



recipient card or letter to the Admissions office to help establish Florida Residency for Tuition Purposes.

Financial Aid

Student Financial Aid

Financial aid is any grant, scholarship, loan or employment offered to assist a student to meet college expenses. Funding is usually provided by federal and state agencies, foundations, corporations, private donors and/or the College itself. Most financial aid is based on financial “need” as determined by the federal government’s system of needs analysis.

The amounts and types of financial aid that a student can receive are determined by federal, state and institutional guidelines. Financial aid is usually offered in “packages,” which may consist of a combination of grants, loans, employment and scholarships. Grants and scholarships are regarded as a “gift” and need not be repaid. Loans are usually offered at low interest rates and can be repaid over an extended time period. When aid is offered in the form of employment, the student is paid an hourly rate for work performed (usually minimum wage).

Students who wish to be considered for financial assistance offered by or through the College, including scholarships, must complete and submit the FAFSA (Free Application for Federal Student Aid, see “How to Apply”). The availability of certain types of financial aid is depen-

dent upon the student’s immigration status. Financial aid is available for approved and/or certified credit and vocational certificate programs of study.

Philosophy of Financial Aid

The objective of the student financial aid program at Miami Dade College is to provide financial assistance to students who need assistance in funding their educational goals. Financial aid officers are trained and available to counsel and assist students and parents seeking additional or alternative sources of aid.

Prospective students and parents are strongly encouraged to contact the Financial Aid Office at any one of our campuses to obtain additional information regarding financial aid opportunities.

What is Financial Need?

Financial need is defined as the difference between the cost of education and the amount the student (and parents) can be expected to contribute to offset educational expenses. Financial need is based on federal regulations and information provided by the student and/or student’s family on the Free Application for Federal Student Aid (FAFSA, see below).

How to Apply

To be considered for most types of financial assistance, a student must complete the Free Application for Federal Student Aid (FAFSA). The FAFSA is available online at www.fafsa.ed.gov. The application process begins Oct. 1 for the academic year that begins in August. The results of the federal analysis are transmitted electronically to the College and are also sent to the student in the form of a Student Aid Report (SAR) via email or regular mail.

Students should carefully read all notifications and communications from the U.S. Department of Education, Federal Student Aid offices and in a timely manner, provide information to the College or on the FAFSA, if the information originally submitted has to be corrected.

Miami Dade College reserves the right to request supplemental information from parent(s), guardian(s), spouse and/or student as required by the financial aid staff to assess the need of the student. Students who are eligible to receive outside educational assistance such as Veterans Administration benefits and vocational rehabilitation assistance are expected to apply for this assistance through the appropriate agencies..

Verification

The Department of Education selects applicants for verification randomly, to determine the accuracy of

the information provided on the FAFSA. If selected for verification, a student will be asked to provide additional information, such as but not limited to federal, tax return transcripts. Student files will not be processed until all required documentation is received, verification is complete and all corrections have been made.

Reapplying

Financial aid is not automatically renewed each year. To be considered for financial assistance from one year to the next, all students must reapply. Since the amount and type of aid are based upon the family's financial situation each year, it is quite possible that financial aid awards may change from one year to the next.

Basis on Which Financial Aid is Granted

The amount of financial assistance a student receives is generally determined by the need of the applicant, the availability of funds from federal, state, institutional and private sources, as well as the order in which the applications were completed (first-come, first-served basis).

Students receiving federal financial aid are required to achieve and maintain an acceptable level of academic progress to receive financial aid. Specific eligible categories are posted on the Financial Aid Web page, and information is available in the Financial Aid Office.

Who Qualifies for Financial Aid

To be considered for most need-based assistance, you must meet the following basic eligibility requirements:

- Demonstrate financial need
- Be a U.S. citizen or eligible non-citizen
- Be registered with selective service, if required
- Not be in default on a previous student loan or owe a repayment on previous federal financial aid received at any institution
- Be enrolled at least half-time in an eligible program of study (some aid is available only to full-time students)
- Maintain satisfactory academic progress.
- Additional requirements may apply depending on the financial aid awarded to you.

Refunds and Repayments (Return to Title IV)

Federal regulations mandate that financial aid recipients who drop all courses or officially withdraw from the College before completing 60 percent of their enrollment period for the semester may be liable to repay a portion of the federal aid disbursed. The amount of the return is

calculated using a federal formula that depends on the date the student ceased attendance. A student who owes a repayment will not be eligible for additional financial aid until the repayment is made in full.

Miami Dade College Student Assistance Programs

Scholarships and Grants

Scholarships and grants are available annually for students who require additional financial assistance beyond that received from federal and state sources. College funds for scholarships and grants are provided by businesses, clubs and organizations, agencies and from individual friends of the College through the Miami Dade College Foundation Inc. The primary criterion on which grant and scholarship recipients are selected is financial need. However, academic achievement is strongly considered during scholarship recipient selection. A limited number of grants are made available annually for service to the College and to students who may not be eligible for other types of financial assistance. Students who complete the FAFSA will be considered for a College grant. Students must complete an MDC Scholarship Application online at <http://www.mdc.edu/financialaid/scholarships/default.aspx> to be considered for a scholarship. Scholarship candidates may be required to submit additional documentation and/or information.

Tuition Payment Plan

A Tuition Payment Plan may be offered to students who are unable to pay the full amount of their schedule. Students should review their fee invoice for the term to determine the payment due date and to apply for the Tuition Payment Plan.

Tax Help for Educational Expenses

The Taxpayers Relief Act of 1997 offers several tax credits and deductions for educational expenses. For more information regarding these programs, go to the IRS webpage at: www.irs.gov.

Veterans Administration Assistance

The Veterans Benefit Program is designed exclusively for providing educational assistance to veterans of the United States armed forces and eligible dependents. Miami Dade College is an approved institution for the education and training of veterans and eligible dependents under all public laws now in effect. The College assists veterans and eligible dependents wishing to receive V.A. educational benefits. Personal and academic



counseling, registration fee deferments, tutorial assistance and V.A. Work-Study programs are available. Veterans are encouraged to contact any campus Registrar's Office to obtain further information.

Other Sources of Financial Assistance

Benefits for the Disabled – The state of Florida provides funding for the purchase of special equipment and services for all persons with disabilities enrolled in public postsecondary institutions.

Accessing the Financial Aid Office

- Counseling – Financial Aid counselors are available at all MDC campuses, on a walk-in basis, to assist students.
- Online – You can access the Financial Aid Office webpage at www.mdc.edu/financialaid to obtain more detailed information about financial aid programs, procedures and to check the status of your application and financial aid award.

- Email Communications – Regardless of the campus you attend, you can communicate with the Financial Aid Office via email at: finaid@mdc.edu

Student Complaint Procedures

Prospective or current students may voice their concerns about college rules, regulations, procedures or experience. Students must first voice concerns to the department staff and supervisor. Students who are unable to resolve any concerns on their own, may contact the Federal Student Aid Ombudsman via <https://studentaid.ed.gov/sa/repay-loans/disputes/prepare/contact-ombudsman>.



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STUDENT SERVICES

Advisement and Career Services

Advisement and Career Services support all student populations by facilitating an effective decision-making process regarding educational, transfer and career goals, advisors promote appropriate course selection and assist students with referrals to internal and external resources and support services.

Advisement and Career Services supports first-time-in-college and non-traditional student populations by offering office hours until 7:00pm Monday to Thursday and until 4:30 on Fridays at all of our campuses which facilitates access to the full scope of services provided by advisors even for those students attending classes during non-traditional times. Access to advisors is also available via phone and email.

All first-time-in-college, direct-entry students from high school will be assigned an advisor at their mandatory orientation session (Shark Start) after admission to the College. At that time, students and their assigned advisors will begin to chart an appropriate choice of courses based on the student's academic pathway, placement scores, high school transcripts, non-cognitive factors, and transfer institution of choice. In addition, advisors provide students assistance with career exploration, skills assessments, and guidance about how to best match student's skills and abilities with the right career path. Once a career path is chosen, advisors will provide important information regarding required courses, program information, graduation status and much more.

All students are encouraged to see an advisor after admission to the College, after assessment testing has been completed (for those who require testing) and before first term registration. During these advisement sessions, the student and the advisor can chart an appropriate choice of courses based on the student's chosen pathway. Conferring of graduation eligibility at this time may be crucial to a student's success in meeting their career goals.

During enrollment at Miami Dade College, students are encouraged, and sometimes required, to see an advisor when they encounter academic problems or contemplate a change in educational goals. In addition to helping students chart their educational and professional careers, advisors work with students to resolve problems affecting academic performance. Students may be referred for testing or to community agencies when appropriate, as a means to aid decision-making.

The Advisement and Career Services department also

assists students with career planning, resume building and interviewing skills, and other employment needs. Career-related events, including seminars, career exploration workshops, and job and college fairs, are scheduled throughout the academic year. Students are also provided with guidance and information about transfer options and transfer assistance in preparation for the completion of their degree at the College. Transfer resources, including college catalogs, scholarship information and information on the College's Articulation Agreements with local, in-state and out-of-state institutions are available through the Department and on the MDC website. The department offers a variety of online tools that assist students with job placement, through a feedback system on resumes, cover letters, and interviewing skills assessments.

Academic Requirement Report

The Academic Requirement Report is a tool used for advising purposes only. The catalog and/ or the MDC website should be consulted for program/degree requirements.

Basic Skills Assessment Program

In an effort to provide more effective educational services for students, the College has established a Basic Skills Assessment Program. Through this program, the College can identify the student's academic strengths and weaknesses in reading, writing and mathematics.

Results from the assessment are used to advise students on how best to take advantage of their strengths. Regarding weaknesses, assessment results are used to guide a student into courses designed toward improvement in the respective discipline.

MDC administers the Florida Postsecondary Education Readiness Test (PERT). The PERT is not timed, and it consists of three sections: reading, writing and elementary mathematics.

With the exception of students who meet the criteria for an exemption from common placement testing and develop mental education instruction, the State Board of Education (SBOE) requires entry-level testing for degree seeking students and students who have not met college level competency either through the completion of developmental education requirements in the Florida College System or have not been awarded credit for college-level coursework in the area of deficiency. Students whose



native language is not English may be required to take another test to measure their English proficiency before entry-level testing is permitted. The SBOE also requires institutions offering Postsecondary Career and Technical Education and Adult Education programs to test students pursuing these programs. Miami Dade College (MDC) may accept official test scores from approved academic institutions and approved regional workforce boards.

If a student presents valid Grade 10 FCAT 2.0 (Reading only test dates through March 2017), ACCUPLACER Classic (CPT) test dates through January 27, 2019, SAT or ACT scores that meet or exceed the state minimum score requirements, he or she does not have to take the PERT in the related sub test area. All scores presented must have been obtained within the past two years. To find out what minimum scores a student needs to be exempt from taking the PERT, or for other reasons why a student may not be required to take the PERT, students are asked to call the campus Testing Department. This information may also be acquired by visiting the Testing Web site, accessed from MDC's Homepage (www.mdc.edu) by clicking on 'Admissions', then "Testing Information." If a student does have to take the PERT, he or she should utilize the resources available on the collegewide Test Preparation website, as well as workshops offered through Community Education and other departments, before he or she takes the PERT. A student who entered 9th grade in a Florida public school in the 2003-2004 school year, or any year thereafter, and earned a Florida standard high school diploma or a student who is serving as an active duty member of any branch of the United States Armed Services shall not be required to take the common placement test and shall not be required to

enroll in developmental education instruction in a Florida College System institution. However, a student who is not required to take the common placement test and is not required to enroll in developmental education under this paragraph may opt to be assessed and to enroll in developmental education instruction, and the college shall provide such assessment and instruction upon the student's request. For additional information please contact an academic advisor.

Students without sufficient English-language proficiency to take the PERT are required to take an MDC approved English proficiency placement test (ACCUPLACER ESL) and be placed in designated English for Academic Purposes (EAP) courses. EAP students who have satisfied the 0200 level or above, either by EAP course completion or ACCUPLACER ESL placement, should be encouraged to take the mathematics subtest of the MDC Placement Test at any time in Levels 0300, 0400, or 0500. They must take it no later than the last withdrawal date of the EAP 1600 Level. Continuing EAP students in the 0400 level or above in all four skill areas (Reading, Writing, Grammar, or their equivalents) shall take the reading and writing subtests of the MDC Placement Test after the last withdrawal date of the term for advisement into advanced EAP levels or ENC 1101 in the following term. New incoming students whose ACCUPLACER ESL subtest scores in Reading, Grammar Usage, and WritePlacer ESL place them into the EAP 1500 or 1600 levels shall take the MDC Placement Test prior to registering for EAP courses.

If a student's scores on one or more of the subtests of the PERT fall below minimum passing scores established by the SBOE, he or she must enroll for at least one developmental education course during their first term.

Further evaluation may be conducted in classes, and developmental education course placement changed, based on the results of the additional assessments. If a student meets a minimum score but is identified as likely to benefit from a developmental education course, he or she may enroll in such a course.

The SBOE requires agencies offering Post-secondary Career and Technical Education programs (CTE) to assess the basic skills level of students entering programs of 450 or more contact hours. MDC offers the Tests of Adult Basic Education (TABE) for these career certificate-seeking students. The minimum passing scores vary among the career certificate programs, so a student must check with his or her advisor for these scores. A student must take the TABE within the first six weeks of admission into the program. Academic support labs are available to prepare students to take the TABE. If a student is enrolling in an Adult General Educational program, he or she also must take the TABE. Adult Education students without English proficiency are given the College approved alternate for placement into appropriate Adult English for Speakers of Other Languages (ESOL) program courses. If a student has any questions regarding the TABE, including exemption from taking the test, he or she should contact the campus Testing and Assessment Department. This information may also be acquired by visiting the testing information Web site, accessed from MDC's homepage (www.mdc.edu) by clicking on Admissions then, 'Testing Information.'

Students seeking entrance into MDC's School of Justice are exempt from the TABE testing requirement, but they are required to pass the Florida Basic Abilities Test (FBAT). If a student has any questions regarding the •FBAT, he or she should contact the School of Justice. Students may also visit the FBAT Web site, accessed from MDC's School of Justice homepage (www.mdc.edu/main/justice/mdc.edu) by clicking on 'Assessment Center,' and then 'FBAT.'

Bookstore

Bookstores are located on all of the campuses. Hours vary during the term and at each location, with longer hours in the early weeks of the semesters. Locations and phone numbers are:

Carrie P. Meek Entrepreneurial Education Center:

305-237-1991, Room 1215. When closed, visit the North Campus bookstore.

Hialeah Campus:

305-237-8806, Room 1113, located near Public Safety;

Homestead Campus:

305-237-5042/5043, located in Building F, Room F102, next to the Cafeteria;

Eduardo J. Padrón Campus:

305-237-6019/6696, located in Building 6000.

Kendall Campus:

05-237-2361/ 2063, located in Building 8, Room 8105, across from the Cafeteria and pool;

Medical Campus:

305-237-4178, Room 1180, located between Buildings 1 and 2;

North Campus:

305-237-1247, Room 4101, Building 4000, located just inside the breezeway and the entrance to the Cafeteria;

West Campus:

305-237-8953, located on the first floor;

Wolfson Campus

305-237-3236, Room 2102, Building 2, located beside Fourth Street and near the Cafe.

The best time to purchase textbooks for an upcoming term is at the beginning of classes. If a student has a schedule and/or syllabus, he or she can purchase textbooks before the class begins. When purchasing textbooks, a student should bring his or her schedule as the bookstore is organized alphabetically by course abbreviation and by reference number (six-digit code identifying the class). If a student cannot locate textbooks, the professor's name, or reference number on the shelf tags, the student should ask for assistance at the customer service desk. The store's textbook manager and sales staff can assist in answering questions. If a student purchases a textbook before attending class and later finds that the textbook is incorrect, it can be returned if the student has the original cash register receipt. The textbook must also be in the original shrink-wrap (if applicable), and in the exact condition as when purchased. The refund policy and dates for each term are posted in all of the bookstores and on the cash register receipts. If a student needs any information concerning the refund policy and dates, the student should contact the campus bookstore at the phone number listed above. During the refund periods, new and used textbooks will be fully refundable when returned in the same condition as purchased. If a textbook is not in the same condition as originally purchased, the textbook will be returned at 25 percent markdown from the original price. If the student does not have the original receipt the book can be sold back to the bookstore at buyback. Shrink-wrapped packages are nonrefundable if opened; however if the student has all of the components of the package then a return may be done for a 25 percent markdown from the original price.

Any textbook purchased during the last week of classes or during final exams is not fully refundable, but may be sold back at buyback. If a student has textbooks that are no longer needed, he or she can sell the books back to the bookstore at anytime of the year. The price for the buyback textbooks will vary, depending on the level of demand for the upcoming term and the inventory in the store. If the bookstore has a need for a textbook,

a student can receive up to 50 percent of the new price whether it was purchased new or used. Another feature the bookstore offers is online ordering of textbooks at www.efollett.com. Students can either log in directly to www.efollett.com or upon registering for a class on the MDC website, proceed through Book Now with a link to efollett.com to purchase the textbooks required for their class. By selecting the state, institution and classes, as well as purchasing information, a student may order textbooks and have them delivered directly to his or her home or have them ready for pick up at the bookstore on campus.

First Year Experience

Effective Fall 2014, First Time In College (FTIC) AA degree seeking students must enroll in SLS1106 - First Year Experience Seminar (or approved equivalent). The students will learn skills which will assist in successful transition into college.

Learning Resources

Learning Resources houses, in one department, the Library, Computer Courtyard, and tutoring services for various disciplines. We offer students comfortable and collaborative spaces for individual or group studying with the assistance of librarians or other academic experts just a few feet away. In each campus's Learning Commons, users will find an extensive collection of books (both academic and bestsellers), periodicals, videos, and newspapers; in addition, mobile devices such as laptops, iPads and tablets are available on campus. eBooks, streaming videos and an extensive selection of databases are also available online. All Learning Commons' computers are equipped with an array of educational and tutorial software applications required by many classes offered at MDC. All items within the collection are available to check out for free.

Librarians are available to assist students during the research process both on a one-on-one basis, and in the classroom. In addition, Learning Resources works closely with the Academic Disciplines to provide tutoring in a wide variety of subjects within the Learning Commons. Embedded tutors, learning assistants, educational technologists and supplemental instruction sessions can also extend the tutoring service into the classroom upon request from faculty.

For more information, visit www.mdc.edu/learning-resources

New Student Center

The New Student Center is the first point of contact for prospective and new students who are attending college

for the first time or who are transferring from another institution. Prospective students are encouraged to meet with a pre-admission advisor to obtain information about degree and vocational program options, admissions requirements, assistance with the admissions process and the steps a new student will take from admission through course registration.

The New Student Center conducts orientation sessions prior to each semester. All new degree-seeking students are required to participate in an orientation program. The objective of the new student orientation sessions is to provide practical information to assist new students in transitioning to college life. The New Student Center at the Medical Campus (MC) assists students in pre-select programs as they transition from other campuses. Staff help guide students with course selection, the development of educational plans, and the application process for the selective admission programs at MC.

Registration and Records

Registration is held each term on the dates scheduled by the College Registrar's Office. Students may register online by going to the College's Homepage (www.mdc.edu). Students may register for courses in person at each campus Admissions and Registration. The College Registrar's Office is the designated custodian of all official academic records. The campus Admissions and Registration offices maintains official student transcripts, processes final grades at the end of each term and updates student records with address, name and





approved grade changes. The Collegewide Transcript Processing Services area provides official copies of student transcripts to students, or to institutions or agencies upon request from students. The College also participates in the electronic transmission of student transcripts (to other participating institutions). Students may request academic transcript online at www.mdc.edu/transcripts.

Services for Students with Disabilities

ACCESS – A Comprehensive Center for Exceptional Students' Services

Federal and state laws and regulations guarantee students with disabilities equal access and equal opportunity in post-secondary education. The College provides auxiliary aids and services to assist students with disabilities in achieving equal opportunity. These services include, but are not limited to, assistance with registration, advisement, financial aid, and sign language interpreting services, note takers, adaptive or assistive technology, testing accommodations and more.

The ACCESS department works to promote awareness of disability issues, federal and state regulations, and College procedures that encourage accessibility and inclusion. Under certain circumstances, ACCESS can arrange for program modifications, course substitutions,

and waivers, in accordance with the College's Manual of Procedures.

Students may find out about additional services and eligibility by contacting the ACCESS office or representative in the Division of Student Services at their campus and visiting on line at (HYPERLINK "<http://www.mdc.edu/ACCESS/>" www.mdc.edu/ACCESS/).

Student Health Services

Miami Dade College is not legally or financially responsible for medical care and does not provide the services of a physician on any campus. The Fire Department Rescue Service provides first aid emergency health service.

At the time of application, each student should provide, on the appropriate line of the application form, the name of a person to contact in an emergency. If that contact person changes while the student is attending the College, the student should update that information through the Registrar's Office. Students should carry emergency information at all times, as well as any medical insurance card(s).

Single Stop

Single Stop is a one-stop source for students and immediate family members to be connected to public benefits and local resources. Single Stop offers students a wide array of services including benefits screening, free tax preparation, financial coaching, Food Pantry for Students and health insurance assistance (<https://www.mdc.edu/main/singlestop/>).

Student Wellness

Miami Dade College offers a range of resources to help students emotionally and physically navigate the demanding pace of modern life. From food pantries to financial planning to mental health counseling, Miami Dade College can help students get the help they need (<https://www.mdc.edu/student-wellness/>).

Information and Policies

AIDS Policy

MDC will offer its students and employees diagnosed HIV positive the same opportunities and benefits offered to other students and employees in accordance with appropriate laws and Center for Disease Control (CDC) guidelines. These include access to educational programs, advisement and counseling services, employment opportunities and, financial aid.

The College is committed to a policy of nondiscrimination in the conditions and privileges of employment for those diagnosed HIV positive, but who are otherwise qualified and able to perform the essential functions of the job. Except where course work or employment requires involvement with body fluids, no special policies, procedures or rules will be imposed on students or employees diagnosed with HIV that will limit or restrict the students' participation in College activities and programs or the employees' rights to employment, use of benefits, or livelihood. The College will exercise an appropriate level of privacy and confidentiality in the provision of rights and benefits as required by law.

Automobiles on Campus

Student and faculty parking areas are designated on each campus. The MDCard may be required for access to a lot or a garage. Students must have the MDC parking decal affixed to their car's rear window or bumper. The parking decal is issued upon acceptance to the College. Parking decals are good for one year. Updated decals are available from the Student Life Department on each campus. Miami-Dade County and municipal police enforce traffic and parking regulations on and around each campus. Citations are issued for traffic and parking irregularities; violators may be towed at their own expense.

Although campus security officers patrol parking areas, the College assumes no responsibility for the care or protection of a vehicle or its contents at any time. If a vehicle must be left on campus overnight, students should notify the Campus Security Office.

Visitor parking policies vary by campus, so visitors should phone ahead for information. Visitors parked in unauthorized spaces may be subject to traffic citations and towing at the owner's expense.

Kendall Campus has a multistory parking facility with more than 700 student, staff and visitor parking spaces, as

well as a number of parking lots. The parking garage is open Monday through Friday from 6 a.m. to 11 p.m. and Saturday from 6 a.m. to 6 p.m. The facility is closed on Sundays. During some special events, visitors may obtain parking passes in advance from the Campus Information Booth, from Campus Public Safety (located on the south side of Building 5000), or from the event's sponsor.

Wolfson Campus has a multistory parking garage open to students, faculty and staff. The garage, also known as Building 7, is located between First and Second avenues and between Fifth and Sixth streets. Entrances are on Fifth Street, Sixth Street, and First Avenue. Students must use the MDCard to gain access. Hours of operation vary, so students need to check with security if planning to leave a car after hours.

Medical Campus operates a parking lot at Northwest 10th Avenue and Northwest 20th Street. This lot is equipped with electronic control arms monitored by Campus Public Safety Officers from 6 a.m. to 10:30 p.m. Monday to Thursday, and 6:30 a.m. to 6 p.m. Fridays, Saturdays and Sundays. Handicapped parking is available east of Building 2. Limited shuttle service is provided to and from the Culmer MetroRail station from 6:30 a.m. to 10:30 a.m. and from 3:30 p.m. to 5:30 p.m., Monday





through Friday. Dropoff and pickup at the Campus are north of Building 2. The driveway is posted as a “NO PARKING” and “TOWAWAY” zone. Vehicles parked illegally in this area will be towed. Campus Public Safety enforces traffic laws on campus. Identification is verified before entry to the lots.

Homestead Campus provides visitor, student, faculty and staff parking in designated areas. The College and the Homestead Police Department enforce traffic and parking regulations on the campus.

Eduardo J. Padrón Campus has a multistory parking garage and several offcampus facilities for students. These facilities offer parking free of charge and access is gained upon presentation of an MDCard (or a class schedule with the Registrar’s indication that the student has paid tuition). Direct access to campus buildings is available from the parking garage.

North Campus has numerous lots, though some are accessible only by faculty and staff.

West Campus has numerous parking lots located around the building.

Family Educational Rights and Privacy Act (FERPA) - Information Statement

Release of Student Information

Miami Dade College has a longstanding commitment to protect students’ rights and privacy of information. This commitment will continue as a matter of College practice. The College complies with the provisions of the federal Family Educational Rights and Privacy Act (FERPA), State of Florida law, and Florida State Department of Education, Florida College System rules. These fed-

eral and state requirements concern accessibility and confidentiality of student records. Miami Dade College Procedure 4085, Release of Student Information, provides pertinent details concerning classifications of student records and access and release provisions. The College procedure is available to students, faculty, administration and staff in the Dean of Student Services Office, as well as other offices and departments at each campus. In addition, the complete procedures are published in the Student’s Rights and Responsibilities Handbook.

In accordance with U.S. Public Law 93380 (FERPA), students at Miami Dade College have the right to inspect their educational records and to correct such records if warranted. All student records are open for inspection and review by the student unless he or she waives this right. These records are protected from release of information without written consent. The parent(s) of a dependent student, as defined in Title 26 U.S.C. §152 of the Internal Revenue Code, also has the right to inspect records which are maintained by the College on behalf of the student.

Directory Information, which may be made public, includes:

1. Student name,
2. Major field of study,
3. Participation in officially recognized activities and sports,
4. Weight and height of members of athletic teams,
5. Degrees, honors and awards received,
6. Enrollment status (fulltime, halftime, not enrolled).

The office of the Dean of Student Services or designee will release this information only after the requestor has demonstrated a legitimate need to have such information. Students not wishing the dissemination of Directory Information must complete a statement in the Registrar’s Office, otherwise Directory Information may be disclosed for legitimate purposes by the College.

Additional details concerning the release of student information, including exceptions, challenges to the content of records and related matters, may be obtained by consulting the Dean of Student Services, the Registrar’s Office or designee at any campus.

FERPA information can be found on our website at: www.mdc.edu/main/ferpa/

Grievance Policy

In compliance with federal and state requirements, the College has an institutional grievance policy for students alleging discriminatory practices or sexual harassment. The initial contact point for students to lodge a claim of discrimination or sexual harassment is the office of the Dean of Student Services at Kendall, North and Wolfson campuses, Dean of Students and Administration Support Services at Medical Center and Eduardo J. Padrón cam-

uses, and the Dean of Academic and Student Services at Hialeah, Homestead and West campuses.

Housing

As a college, Miami Dade does not provide or supervise housing facilities. Two or three months' advance payment is generally required for rental housing. Outofarea students should arrive approximately two to four weeks in advance of registration in order to locate suitable housing.

Identification

The MDCard is the official identification card for students and employees.

Students are required to wear visibly and present their MDC identification card when requested by authorized College officials. Any misrepresentation, alteration or misuse of identification is prohibited.

This card will provide immediate access to the library, laboratories and parking lots. Students with questions should contact the Student Life Office at any campus for details.

Students' Rights and Responsibilities

The Students' Rights and Responsibilities publication, available to all students, sets forth the rights of students with corresponding responsibilities. This document details the relationship between student and College. The document covers protection in academic pursuits and privacy of records, sets forth the conditions for responsible behavior on the campus and lists the various appeal mechanisms and grievance procedures available to students.

The section on student discipline complies with Rule 6A14.56, F.A.C., and §240.132, §240.133 and §877.13, F.S. This section concerns control and discipline of college students. The document complies with relevant federal regulations such as the award of financial aid, protection of privacy of records and equal access/equal opportunity. For more information, visit <http://www.mdc.edu/procedures/Chapter4/4009.pdf> and <http://www.mdc.edu/rightsandresponsibilities/>.

Safety and Security

As required by the Federal Student Right to Know Legislation, the College publishes the annual crime statistics for each campus. These statistics may be obtained at the campus bookstore, Registrar's Office or the Public Safety Office. Prospective students may request a copy from the Admissions Office.

Campus Activities

Campus Activities, Clubs and Organizations

There are many opportunities for students to get involved in campus activities. Each year, outstanding artists, musicians, singers, dancers, lecturers and other performers share their talents and expertise with students. Student Life committees, composed of representatives from student groups, assist with the establishment of these programs and the policies governing these activities. In addition, there are oncampus art exhibits, dance programs, music concerts and theatrical productions presented by different campus departments.

Students have the opportunity to join 85+ clubs chartered on the various campuses. The best time to find out about clubs and organizations on each campus is at the beginning of the semester, when most campuses hold special events to publicize the various clubs. Students may also visit the campus Student Life Department to find out how to get involved. All students are encouraged to participate actively in clubs and organizations.

North Campus Pen Players and Kendall Campus Studio Theatre players present several full-length theatrical productions each year and tryouts are open to all students. In addition, there are several programs of experimental one-act plays produced and directed by students. The New World Players give performances in English, both on and off campus. Interested students should contact the campus theater department.

The College bands, choruses and ensembles are open to all students, and in some cases, students can receive college credit for participating in a music group. These groups present numerous concerts each year, both on and off campus, and participate in various College activities. Students can check with each group's director to find out if they need to audition to join. The campus music department is the best resource for information on music groups.

Intercollegiate Athletics

Students with outstanding athletic abilities may try out for one of the following intercollegiate sports teams: men's, basketball or baseball; women's, basketball, volleyball or softball. Miami Dade College teams, all known as The Sharks, compete at the highest level of the National Junior College Athletic Association. Each year, Shark teams travel around the state to compete against other college teams, and they consistently finish in the



higher rounds of conference and state events. Sharks also have the opportunity to compete for the National Junior College Championship, and have the chance to be selected for NJCAA AllAmerican teams and other special awards. MDC offers first-rate athletic facilities, training and conditioning services and a talented coaching staff. For information on trying out for an athletic team, contact the college director of athletics, based at Kendall Campus. Student Government Association

Students are given an opportunity for self-government. A student-run governing body works with faculty and administration to formulate appropriate policies. The Student Government Association (SGA) provides an opportunity for students to gain the leadership skills vital in today's competitive job market.

Student Publications

The Reporter is the student newspaper at Miami Dade College. It was launched on Oct. 4, 2010, features 16 pages printing on a biweekly schedule and has a circulation of 10,250 per print cycle. It is augmented by a website with video and audio content.

The Reporter is distributed collegewide and has news-rooms at the North, Wolfson and Kendall campuses:

North Campus Bureau 11380 N.W. 27th Avenue,

Room 4209, 3052371255

Kendall Campus Bureau 11011 S.W. 104th Street, Room M239, 305237 2323

Wolfson Campus Bureau 300 N.E. Second Avenue, Suite 1610, 3052373477.

The Antidote Newsletter at Medical and the Urbana at Eduardo J. Padrón are under the guidance of advisors who work with student editors and staff members. These publications serve as the media for student expression on matters involving the curricular and extracurricular activities of the College. These publications also provide training for those interested in journalism.

The Students' Rights and Responsibilities Handbook provides students on each campus with basic information about collegewide policies and procedures.

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ACADEMIC REGULATIONS

Attendance in Class

Students are expected to attend every class meeting and to arrive on time. Students who expect to miss a class, or those anticipating tardiness, should let the instructor know. In most courses, attendance requirements are listed on the syllabus. It is the responsibility of the student to make up work missed.

Audit

Students desiring to enroll in a course at Miami Dade College, but who do not wish to receive a grade or credit for the class, may elect to audit. Students will not be allowed to change from an audit status to a credit status (or from credit to audit) after the 100 percent refund date for each term.

Audit courses will be included in the student's academic record with a non punitive grade of "Z"; however any audit courses taken prior to fall 2016 will show a grade of "X". Courses and credits enrolled for audit purposes do not count in the computation of a student's full-time or part-time enrollment status. College Preparatory students, who are required to be certified as completing competency-based College Preparatory instruction, cannot be enrolled under audit status.

Auditing a class costs the same as enrolling for a credit course.

Course Load

All credit courses carry a specified number of credits. A 3-credit lecture course normally meets three hours per week during the 16-week terms, and eight hours per week during the six-week terms. Lab classes gen-

erally meet for two hours per credit.

The fall and spring terms are called "major terms" and are approximately 16 weeks long. During a major term, a full course load is considered to be between 12 or more credits. The summer term consists of two six-week summer sessions (first six-weeks/second six-weeks). Some courses are scheduled for the combined summer sessions of 12 weeks. During the six-week summer session a full load is considered to be 6 or more credits.

It is suggested that students who are employed should reduce their college load as follows:

Work Hours per week	# Credits fall/spring	# Credits summer A/B
20	12-15	6-7
25	8-11	5-6
40	6-7	3

Grading System

Students in college credit and vocational credit courses are graded according to the following grade point average (GPA) system:

A. Used in GPA computation:

Course Code	Credits	Grade	Total Points
ENC 1101	3	A	12
HUM 120	3	C	6
ISS 1120	3	F	0
ISS 1161	3	B	9
ART 1300C	3	C	6
DAA 1160	1	B	3
Total	16		36

Divide 36 points by 16 credits = 2.25 GPA

Grade	Interpretation	Point Value
A	Excellent	4
B	Good	3
C	Average	2
D	Poor	1
F	Failure	0

B. Not used in GPA computation:

Code	Interpretation
I	Incomplete
W	Withdraw
Z	Audit
S	Satisfactory
P	Progress - course requirements not completed, student must repeat
U	Unsatisfactory
NR	Grade not recorded by instructor

Final grades are available on the College's Web site following the end of the term.

Grade Point Average (GPA)

Each letter grade has a point value (see above). To compute the grade

points for a course, multiply the grade point value by the number of credits. For example, a “B” in a 3-credit course, is worth 9 points. A “B” in a 4-credit course is worth 12 points. To calculate a GPA, add the total grade point values for all courses and divide that figure by the total number of credits attempted.

In order to graduate from any credit program at MDC and/or to qualify for entry into a bachelor's degree program, a student must have a minimum 2.0 GPA.

Repeating Courses

Students may repeat courses taken at MDC if they received a “W,” “U,” “D,” or “F” grade.

State rule (F.A.C. 6A-14.0301) limits the number of repeat attempts to three per course. The third and final repeat attempt (i.e., the fourth time a student attempts the course) may be granted only if the student petitions <https://www.mdc.edu/media/mdc/smart/documents/3rd-Attempt-Form-Extenuating-Circumstances.pdf> through an appeals process, and if the student has documentation to convey extenuating circumstances. However, a student is not permitted to withdraw during the third or fourth attempt (i.e., a grade must be assigned). Repeated surcharges apply to any third or fourth attempt. All courses originally taken and then repeated will appear on the student's transcript with assigned grades, but the GPA will be recomputed to average the third and subsequent attempts of computable grades.

Specific courses, as identified in the course description section, may be repeated multiple times for additional credit. All attempts of these courses will be included within the GPA. Students should note that some state universities and colleges may not accept courses repeated for additional credit. Students should also be aware that

some private colleges or universities might not accept the grade of a repeated course, and that some institutions compute the grade originally assigned.

Incomplete “I” Grade

When a student is unable to complete the requirements of a course by the end of the semester, the student may be assigned an “Incomplete” or “I” grade. The “I” grade is recorded by the instructor if the student has valid reasons for not being able to finish the work. The student and instructor complete an “Agreement for Grade of Incomplete” form, which stipulates the work to be completed for a grade. If the student has not completed the required coursework after 180 calendar days, the incomplete grade will be changed to a failing grade.

Grade Appeals

The responsibility for the academic evaluation and assignment of grades is that of the faculty member teaching the course. A student who believes that he or she has been unfairly graded should first appeal the grade to the faculty member. If satisfaction is not achieved, the student may appeal through administrative channels (Department Chair, Academic Dean or the grade appeals committee <http://www.mdc.edu/procedures/Chapter8/8301.pdf>).

Academic Amnesty

Students with credits more than 10 years old may petition to have these grades excluded from cumulative GPA calculation. This is a one-time privilege. Students may not request specific courses to be removed; it must be the entire prior record. Students may obtain a Request for Academic Amnesty form at any Advisement & Career Services Department.

Since academic amnesty does

not remove courses from the academic record (it only excludes them from cumulative grade point average calculations at MDC), state/federal regulations concerning course attempts will still apply. Therefore, if a student has three or more attempts in the same course, state regulations mandate that the student be assessed the full cost of instruction and not be permitted to withdraw after the 100 percent refund deadline for the course.

Academic amnesty does not apply to federal and state financial aid regulations. The academic record impacted by academic amnesty is not excluded from federal and state financial aid policies. Students should consult an MDC financial aid advisor prior to requesting academic amnesty. Academic amnesty requests that include courses that were used as part of the requirements for a previously awarded program of study will not be processed.

Petitions Committee

The Petitions Committee (<http://www.mdc.edu/procedures/Chapter4/4018.pdf> and <http://www.mdc.edu/rightsandresponsibilities/docs/College-Wide-Student-Petitions.pdf>) considers exceptions to financial and withdrawal policies as stated in this catalog. Students should submit a written petition to the committee. The committee will make a recommendation to the Dean of Student Services for approval and implementation. The decision of the Dean is final. Petitions should identify the student (complete name and student number), and clearly and concisely state the request (by writing a personal letter and supplying supporting documentation for the reason stated in the letter). Students should address the petition to: Petitions Committee, Dean of Student's Office, and submit the petition at the campus at which they are regis-



tered for courses. Petitions must be made by the end of the next major term (fall and spring).

Student Ombudsman

MDC has a student ombudsman who serves as the initial point of contact for students who have concerns, complaints or issues related to College processes, policies and procedures. The Ombudsman listens to student concerns; directs students to the appropriate MDC office, policies and procedures; and, if requested, assists students in completing the forms required to obtain a resolution. The Student Ombudsman has the authority to investigate issues and arrange meetings among the involved parties in order to reach a resolution. MDC has designated the Student Ombudsman as the Assistant Dean of Student Services or designee at each campus.

Standards of Academic Progress

The main purpose for the Standards of Academic Progress (SOAP) Procedure is to establish a formal

process through which the faculty, staff, and administration at Miami Dade College may identify and provide support to students who experience academic difficulty and fall below a Combined Cumulative Grade Point Average (GPA) of 2.0 (Calculated from the combined graded units for GPA). The combined Cumulative GPA includes computation of grades for both MDC and posted transfer courses. Good Academic Standing is defined as 2.0 or higher for the Combined Cumulative GPA. SOAP is not intended to discourage or penalize students. Rather, SOAP reflects the commitment of the College's faculty, staff, and administration to provide students with assistance and support to ensure success in achieving their educational goals. Students have available to them a variety of means to remedy their cognitive and non-cognitive challenges and to be academically successful. When academic progress has not been satisfactory, SOAP requires students to meet with an academic and career advisor to develop an academic improvement plan and discuss support services that may assist them

in achieving good academic standing. Students who are not in Good Academic Standing are ineligible to run for executive board positions in student organizations unless special permission is granted by the Dean of Students at their home campus. The overall objective of SOAP is to improve the performance of students experiencing academic difficulty by connecting them to academic and student support services (<https://www.mdc.edu/procedures/Chapter4/4010.pdf>).

Categories for Standards of Academic Progress

Academic Warning: 7-16 combined graded units for GPA with less than a 2.0 for the Combined Cumulative GPA.

Academic Probation: 17-29 combined graded units for GPA with less than a 2.0 for the Combined Cumulative GPA.

Academic Suspension Alert: 30 or more combined graded units for GPA with less than a 2.0 for the Combined Cumulative GPA and less than a 2.0 for the Term GPA and previously in Good Academic Standing.

Academic Suspension: 30 or more combined graded units for GPA with less than a 2.0 for the Combined Cumulative GPA and less than a 2.0 for the Term GPA and previously on Academic Probation or Academic Suspension Alert.

Extended Academic Probation: 30 or more combined graded units for GPA with less than a 2.0 for the Combined Cumulative GPA but the Term GPA is 2.0 or higher and previously on Academic Suspension or Dismissal.

Academic Dismissal: 30 or more combined graded units for GPA with less than a 2.0 for the Combined Cumulative GPA and less than a 2.0 for the Term GPA and previously on Academic Suspension.

Interventions for each Category of Standard of Academic Progress (SOAP)

- A. Academic Warning** Students must meet with an academic and career advisor prior to enrolling in courses to develop an academic improvement plan which may include referrals to academic support /tutoring and/or student support services, career advising, learning style assessment, and/or enrollment in a Student Life Skills (SLS) course. Students may also be required to reduce their course load.
- B. Academic Probation or Academic Suspension Alert** Students must meet with an academic and career advisor prior to enrolling in courses to develop an academic improvement plan which may include referrals to academic support /tutoring and/or student support services, career advising, learning style assessment, and/or enrollment in a Student Life Skills (SLS) course. Students may also be required to reduce their course load.
- C. Academic Suspension** Students are required to pause enrollment in credit courses at the College for

the subsequent term (fall, spring, or summer term). Students on Academic Suspension may submit an appeal to the Director of Advisement at their home campus for consideration of continued enrollment.

- D. Extended Academic Probation** Students who have successfully appealed Academic Suspension or who have met the time conditions for suspension may continue enrollment in credit courses at the College under the category of Extended Academic Probation, provided that they maintain a Combined Cumulative GPA of 2.0 or higher. Students must meet with an academic and career advisor prior to enrolling in courses to develop an academic improvement plan which may include referrals to academic support /tutoring and/or student support services, career advising, learning style assessment, and/or enrollment in a Student Life Skills (SLS) course. Students may also be required to reduce their course load.
- E. Academic Dismissal** Students are required to discontinue enrollment in credit courses at the College for at least twelve months. Academic Dismissal occurs after students fail to meet the minimum requirements of maintaining a 2.0 for the Term GPA during Extended Academic Probation after being readmitted from Academic Suspension. Students on Academic Dismissal may submit an appeal to the Dean of Students at their home campus for consideration of continued enrollment.

Guidelines for Appeal of Standards of Academic Progress

Students may appeal if on academic suspension or dismissal according to the MDC Procedure

4015 Guidelines for Appeal of the Standards of Academic Progress (<https://www.mdc.edu/procedures/Chapter4/4015.pdf>). In order for the appeal to be considered, students must present evidence/supporting documentation that reflects a change in their situation and supports their academic success. Students who are on academic suspension are eligible to submit an appeal for consideration of continued enrollment on a term-by-term basis. Students who are on academic dismissal are eligible to appeal for re-admission to the College after the dismissal period. Admission will be on a petition basis.

Administrative Review

Students who have attempted 30 credits with less than half their credits earned or with less than a 2.0 for the Combined Cumulative GPA may be subject to a special administrative review. If their academic record reflects unusual conditions of academic difficulty, their status under the Standards of Academic Progress may be administratively adjusted.

Standards of Progress for Students Receiving Financial Aid

A student receiving financial aid must meet "Standards of Academic Progress." Federal regulations state that students are eligible to receive financial aid benefits for up to 150 percent of the number of credits registered to complete the degree or certificate. After the 150-percent mark, benefits will terminate. This applies to all registered credits, including courses that were attempted or withdrawn from, but not including "I" grades or audits. Thirty credits of College Preparatory and AP credits are exempted from this 150-percent rule. Students who meet or exceed the 150 percent are

no longer eligible to receive federal/state financial aid. For extenuating circumstances, students may appeal through the Petition for Financial Aid Waiver.

Code of Conduct

By the act of registering at Miami Dade College, a student agrees to abide by the Code of Conduct of the College. A student who violates the Code of Conduct while on College property or while participating at a College-sponsored event may be suspended (<http://www.mdc.edu/procedures/Chapter4/4025.pdf>). Refer to Petitions Committee (<http://www.mdc.edu/procedures/Chapter4/4018.pdf> and <http://www.mdc.edu/rightsandresponsibilities/docs/College-Wide-Student-Petitions.pdf>) for more information.

Transcript of Records

A transcript (<http://www.mdc.edu/transcripts/>) is a printed list of all the courses taken, the number of credits and grade earned. Transcripts summarize the GPA and also indicate the receipt of any certificates or degrees. Students must submit a written request to the Registrar's Office in order to have a transcript sent to a particular location.

Students will be unable to get a transcript if an obligation to the College has not been satisfied. These obligations include unpaid fees or overdue loans, as well as the return of library books, audiovisual media and athletic equipment.

Drops and Withdrawals

Dropping Courses

Students may drop courses within the drop period indicated on their class schedule. They may do so online using their MyMDC account, or in person at any campus Admissions and Registration Office.

Note that a reduction in course load may impact athletic eligibility, financial aid, scholarships, and veteran benefits.

Administrative Withdrawal from Courses

Miami Dade College reserves the right to cancel courses and/or programs for which there is insufficient enrollment, to close a course when the enrollment limit in that course is reached and to make any schedule changes as necessary, including a change in time, days, credit, location or instructor. In the event of course cancellation, the College will notify each registrant by email and/or by telephone and will issue a full refund for the course. Miami Dade College is not responsible for any other related expenses. Students may see an academic advisor regarding selection of another course.

Faculty have the right to withdraw a student from their course for lack of attendance ("no show") or excessive absences as determined by established departmental guidelines.

If a student is withdrawn from a course or courses for disciplinary reasons, the student is not entitled to a refund of matriculation, tuition or special fees.

College Withdrawal Policy for Credit and Developmental Education Courses

Students who enroll in the same course for the third time (or subsequent time) will not be permitted to withdraw from (drop) the course. Attempts taken by students prior to the Fall Term 1997 will not be counted as an attempt for the purposes of this policy. An attempt is counted any time students officially enroll, have a schedule validated for a course, and do not withdraw from (drop) the course with a refund. For example, a student enrolled

in a course in the Fall Term 2015 and received an "F" grade in the course. The student enrolled again in the same course in the Spring Term 2016 and found it necessary to withdraw from (drop) the course with a grade of "W" (Withdrawal). The student enrolled again for the third time in the course for the Summer Term 2016. The student needed to withdraw again from the course. This was not permitted, and the student received a valid grade of A, B, C, D, F, S, P or U at the end of the term.

Cost to Re-Enroll in a Course

Florida Statutes 1009.28 (applies to developmental education courses) and 1009.285 (applies to college credit courses) state that students who enrolled in the same course twice, received a grade of W, D, F, P, U or X and wish to re-enroll for the third time must pay the full cost of instruction for this attempt and any later attempts. This fee is equivalent to the cost of the course for a student paying fees as a nonresident of the state of Florida for tuition purposes. Students who are assessed the higher fee on the third attempt only may appeal to have the fee lowered. Contact the Dean of Student Services Office at the campus where the course is offered for more information. A student cannot re-enroll in a course for credit if the student previously earned a grade of I, S, C or better. This policy is a result of 6A-14.0301 Florida Administrative Code.

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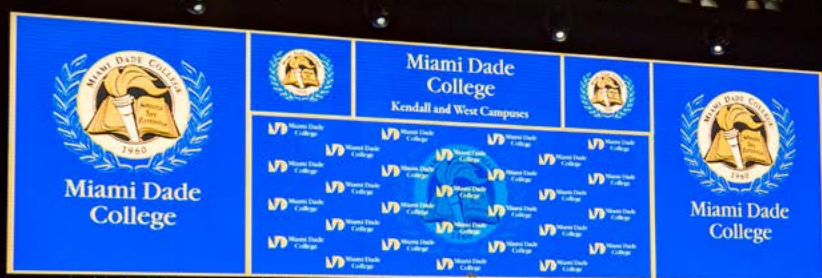
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GRADUATION REQUIREMENTS AND TRANSFER INFORMATION

Graduation Requirements

Miami Dade College awards baccalaureate degrees in education, public safety management, nursing, supervision and management, film/television and digital production, health sciences with an option in physician assistant studies, electronics engineering technology, biological sciences, and early childhood education, as well as Associate in Arts, Associate in Science, and the Associate in Applied Science degrees. MDC also offers college credit certificates, advanced technical certificates and career technical certificates. Students must meet the general education requirements and any program requirements to be eligible for a degree.

Continuous Enrollment for Graduation Requirements

The College graduation requirements are based upon the term of admission or readmission to Miami Dade College. Those requirements apply as long as the student has continuous annual enrollment. If a student does not register for a period exceeding one year, he or she is subject to the graduation requirements in effect for the year and term of re-admission to the College.

Residency Requirements for Graduation

To satisfy the residency requirement for graduation, students must earn at Miami Dade College a minimum of 25 percent of the credits applicable toward the program of study for which graduation is sought. Additional requirements for specific programs of study include:

1. All Associate in Science/Associate in Applied Science degree-seeking students, as well as College Credit Certificate-seeking and Career and Technical Education-seeking students, must earn at Miami Dade College a minimum of 50 percent of the credits in discipline-specific courses.
2. Baccalaureate degree students must earn at Miami Dade College a minimum of 50 percent of the credits in upper-division course work.
3. Different residency requirements may apply as required by programs that have special accreditation or by state regulations such as the statewide articulation agreements.

4. All financial obligations must be fulfilled in order to graduate from any MDC program of study.
5. All associate, baccalaureate, and college credit programs require a minimum 2.0 GPA to graduate; some programs may have higher GPA requirements.

Baccalaureate Degree

Required Hours and GPA

Successful completion of a minimum of 120 semester hours or as approved by the State Board of Education, and a minimum GPA of 2.0 is required to earn a baccalaureate degree.

Note: A higher GPA may be required for specific majors.

General Education

Satisfactory completion of General Education courses (36 semester hours) as follows:

- Area I. English Composition (6 semester hours)
- Area II. Oral Communication (3 semester hours)
- Area III. Humanities/Fine Arts (6 semester hours)
- Area IV. Behavioral/Social Science (6 semester hours)
- Area V. Natural Science (6 semester hours)
- Area VI. Mathematics (6 semester hours)
- Area VII. General Education Elective (3 semester hours) Per 6A-10.030, Florida Administrative Code

Civics Literacy Competency

All Associate in Arts and baccalaureate seeking students must complete the civic literacy requirement. The requirement may be met by successfully completing one of the following: AMH2020; POS2041; or achieving the standard score on the AP Government and Politics: United States (minimum score of 3), AP United States History (minimum score of 4) or CLEP: American Government (minimum score of 50).

Computer Skills Competency

All MDC degree-seeking students with 16 or more credits must demonstrate computer competency prior to graduation. Students demonstrate this competency by passing the MDC computer competency test, currently known

as CSP (Computer Skills Placement) examination or by enrolling in and successfully completing an equivalent course. No credit is awarded for successful completion. For additional information please visit the Testing Criteria Computer Competency Web site, accessed from MDC's Homepage (www.mdc.edu) by clicking on 'Admissions', then 'Testing Information'.

Requirements for Admission to Upper Division

Students should review the Baccalaureate Degree section of this catalog and contact the Academic Department responsible for the specific Baccalaureate admissions criteria.

Foreign Language Requirement

In accordance with Rule 6A-10.02412, Florida Administrative Code and pursuant to Section 1007.262, Florida Statute, all AA and baccalaureate degree-seeking students must demonstrate Foreign Language Competence (FLC) by: (a) successfully completing the elementary 2 level (i.e., 2 years of secondary/high school level) or postsecondary/college level equivalent in one (1) foreign language or American Sign Language OR (b) successfully completing a standardized examination that documents the required FLC. Students who demonstrate proficiency in a native language other than English are exempt. For more information, please visit the MDC Credit-by-Exam website or contact the MDC World Languages department.

Associate in Science/ Associate in Applied Science Degrees

Associate in Science degree: Awarded to students who successfully complete a program of career and technical instruction consisting of lower division college credit courses to prepare for entry into employment. The associate in science degree is a transfer degree and a basis for admission to a related bachelor's degree. The associate in science degree shall be awarded upon satisfactory completion of a planned program of instruction comprised of the standard credit hour length established, after demonstration of the attainment of predetermined and specified performance requirements. The standard credit hour length of all associate in science degree programs as defined in Rule 6A-6.0571, F.A.C.

Associate in Applied Science degree: Awarded to students who successfully complete a program of career and technical instruction consisting of lower division college credit courses to prepare for entry into employment. The associate in applied science degree shall be awarded upon satisfactory completion of a planned program of instruction comprised of the standard credit hour length

established, after demonstration of the attainment of predetermined and specified performance requirements. The standard credit hour length of all associate in applied science degree programs as defined in Rule 6A-6.0571, F.A.C.

Requirements for Associate in Science/ Associate in Applied Science Degrees

1. Complete an approved program of study with 60 credits or as approved by the State Board of Education.
2. Earn a minimum 2.0 cumulative GPA in the 60 credits or as approved by the State Board of Education required for graduation.
3. Complete a minimum of 15 credits of general education courses.
4. Meet MDC Residency for Graduation requirements.

General Education and Miami Dade College Student Learning Outcomes

General Education: Student Learning

The General Education program provides multiple, varied, and intentional learning experiences that provide you with a solid foundation for your personal, academic, and professional development. The program is meant to facilitate the acquisition of fundamental knowledge and skills and the development of attitudes that foster effective citizenship and the desire for lifelong learning. What begins in specified general education coursework is reinforced and expanded by purposeful Student Learning Outcomes present throughout your degree program and co-curricular activities.

Student Learning Outcomes: A Promise between Students and Faculty

All students who graduate from MDC - regardless of major or degree type - have 10 things in common: the college-wide student learning outcomes (CSLO) summarized below. Developed collaboratively by students, faculty, alumni and industry partners, and adopted in 2007, the outcomes are part of the Miami Dade College learning experience. The CSLOs will help you to succeed in your chosen field, to strengthen the life skills critical to your future and to encourage you to become lifelong learners.

1. **Communication** – Good communication skills are defining characteristic in both personal and professional development. A MDC education helps students develop effective communication habits and skills.
2. **Quantitative Analysis** – Numbers are everywhere,

- from the calories in your favorite soda to political polls. You will be able to process, understand and accurately analyze numerical data.
- Critical/Creative Thinking and Scientific Reasoning** – There is no guarantee that you will know all the answers by the time you graduate, but you will develop the skills needed to think through a situation, consider multiple points of view, and arrive at a fair, unbiased conclusion.
 - Information Literacy** – Most individuals use Internet search engines such as Google, Bing or Yahoo to find information quickly. However, academic research requires you to determine if the information you find is trustworthy. By the time you graduate, you will know the pros and cons of using Internet resources and be able to locate relevant and accurate information resources.
 - Global, Cultural and Historical Perspectives** – MDC students represent over 170 nationalities and speak over 65 different languages. As a member of this college community, you will build a strong foundation in engaging with others who may have a different history from you. In order to succeed in this global workforce environment and society, you will learn to develop an appreciation of various cultures and an understanding of different points of view.
 - Personal, Civic and Social Responsibility** – While at MDC, you will develop skills to fulfill not only your personal responsibilities, but also your roles as citizens. As members of your local and global community, participation in activities such as the census, or voting, or volunteering are some ways that your actions may impact your local and global community. For example, John Donne said, “No man is an island.” Everything you do and say has an impact on those around you.
 - Ethical Thinking** – Our core beliefs influence the way we view headlines such as Black Lives Matter; Plagiarism and Political Speeches; Wikki Leaks; Big Data and Privacy; Political Corruption; Campaign Rhetoric; or Childhood Vaccines. Your course of study will help you identify ethical dilemmas and issues through a disciplinary lens and help you to develop perspectives based on ethical concepts, not just your core beliefs.
 - Computer and Technology Usage** – You can probably surf the Net, send emails and create posts for social media already, but there are other ways technology can support your educational experience. Before you graduate, you will learn how to use word processing, spreadsheets, databases and presentation programs.
 - Aesthetic Appreciation** – As a well-rounded MDC student, you will learn to appreciate the

beauty around you, the creative process, and the value of artistic expression.

- Natural Systems and the Environment** - An understanding of natural systems is important in caring for your health, considering the world around you, and incorporating sustainable practices in your everyday life.

General Education Requirements for the Associate in Arts

To receive an Associate in Arts, students must complete 36 “General Education” credits.

**Designates “Gordon Rule” course.

Students must complete the following (information located at www.mdc.edu/academics/programs/default.aspx):

ASSOCIATE IN ARTS

Total credits required for the degree: 60

COMMUNICATIONS 6 Units**

State Core: Group A:

ENC 1101 - English Composition 1 (Gw)

MDC Core: Group B:

ENC 1102 - English Composition 2 (Gw)

MATH 6 Units**

Select one State Core course and one MDC Core course.

Lab units are not allowed in this area.

State Core: Group A Courses: 3 units

MAC 1105 - College Algebra (Gc)

MAC 2311 - Calculus & Analytical Geometry (Gc)

MGF 1106 - Math for Liberal Arts 1 (Gc)

MGF 1107 - Math for Liberal Arts 2 (Gc)

STA 2023 - Statistical Methods (Gc)

and

MDC Core: Group B Courses: 3 units

MAC* (Gc) MAS* (Gc) STA2023 (Gc)

MAD* (Gc) MGF* (Gc) MTG2204 (Gc)

MAP* (Gc) QMB2100 (Gc)

ORAL COMMUNICATIONS 3 Units**

Select one of the following.

ENC 2300 - Advanced Composition and Communications (Gw)

LIT 2480 - Issues in Literature and Culture (Gw)

SPC 1017 - Fundamentals of Speech Communication (Gw)

SPC 2608 – Introduction to Public Speaking (Gw)

HUMANITIES 6 Units**

Select 1 course from State Core and 1 course from MDC Core

State Core: Group A Courses 3 units

ARH 1000 - Art Appreciation

HUM 1020 - Humanities
 LIT 2000 - Introduction to Literature (Gw)
 MUL 1010 - Music Appreciation
 PHI 2010 - Introduction to Philosophy (Gw)
 THE 2000 - Theater Appreciation (Gw)

and

MDC Core: Group B Courses 3 units

ARC 2701 - History of Architecture 1
 ARC 2702 - History of Architecture 2 (Gw)
 ARH 1000 - Art Appreciation
 ARH 2050 - Art History 1
 ARH 2051 - Art History 2 (Gw)
 ARH 2740 - Cinema Appreciation (Gw)
 DAN 2100 - Dance Appreciation
 DAN 2130 - Dance History 1 (Gw)
 HUM 1020 - Humanities
 IND 1100 - History of Interiors 1
 IND 1130 - History of Interiors 2 (Gw)
 LIT 2000 - Introduction to Literature (Gw)
 LIT 2120 - A Survey of World Literature (Gw)
 MUH 2111 - Survey of Music History 1
 MUH 2112 - Survey of Music History 2 (Gw)
 MUL 1010 - Music Appreciation
 MUL 2380 - Jazz and Popular Music in America (Gw)
 PHI 2010 - Introduction to Philosophy (Gw)
 PHI 2604 - Critical Thinking and Ethics (Gw)
 THE 2000 - Theater Appreciation (Gw)

BEHAVIORAL & SOCIAL SCIENCES 6 Units**

If a Behavioral Science course is selected from the State Core, then a Social Science course must be selected from the MDC Core. If a Social Science course is selected from the State Core, then a Behavioral Science course must be selected from the MDC Core.

State Core A: BEHAVIORAL SCIENCES: 3 units

ANT 2000 - Introduction to Anthropology
 PSY 2012 - Introduction to Psychology
 SYG 2000 - Introduction to Sociology

and

MDC Core A: SOCIAL SCIENCES: 3 units

AMH 2010 - History of the United States to 1877
 AMH 2020 - History of the United States from 1877***
 ECO 2013 - Principles of Economics (Gw)
 ISS 1120 - The Social Environment
 POS 2041 - American Federal Government***
 WOH 2012 - History of World Civilization to 1715
 WOH 2022 - History of World Civilization from 1715

---OR---

State Core B: BEHAVIORAL SCIENCES: 3 units

ANT 2000 - Introduction to Anthropology
 ANT 2410 - Introduction to Cultural Anthropology
 CLP 1006 - Psychology of Personal Effectiveness

DEP 2000 - Human Growth and Development
 ISS 1161 - The Individual in Society
 PSY2012 - Introduction to Psychology
 SYG2000 - Introduction to Sociology

and

MDC Core B: SOCIAL SCIENCES: 3 units

AMH 2020 - History of the United States from 1877
 ECO 2013 - Principles of Economics (Gw)
 POS 2041 - American Federal Government

NATURAL SCIENCES 6 Units**

If a Physical Science course is selected from the State Core, then a Life Science course must be selected from the MDC Core. If a Life Science course is selected from the State Core, then a Physical Science course must be selected from the MDC Core.

State Core A: LIFE SCIENCES: 3 units

BSC 1005 - General Education Biology
 BSC 2010 - Principles of Biology
 BSC 2085 - Human Anatomy & Physiology
 EVR 1001 - Introduction to Environmental Science

and

MDC Core A: PHYSICAL SCIENCES: 3 units

AST 1002	OCE*	CHM*
GLY*	PHY*	MET*
ESC 1000	PSC 1515	PSC 1121

---OR---

State Core B: LIFE SCIENCES: 3 units

BOT 1010	BSC 1005	BSC 1030
BSC 1050	BSC 1084	BSC 2010
BSC 2020	BSC 2085	BSC 2250
EVR 1001	HUN 1201	OCB 1010
PCB 2033	PCB 2340C	ZOO 1010

and

MDC Core B: PHYSICAL SCIENCES: 3 units

AST 1002 - Descriptive Astronomy
 CHM 1020 - General Education Chemistry
 CHM 1045 - General Chemistry & Qualitative Analysis
 ESC 1000 - General Education Earth Science
 PHY 1020 - Fundamentals of Physics
 PHY 2048 - Physics with Calculus 1
 PHY 2053 - Physics without Calculus 1

GENERAL EDUCATION ELECTIVE 3 Units

Select one course from any of the following options.

ACG 2021	AMH 2010	AMH 2020	ANT 2000
ANT 2410	ARC 2701	ARC 2702	ARH 1000
ARH 2050	ARH 2051	ARH 2740	ASL 2160C
ASL 2200C	ASL*	AST*	BOT*
BSC*	CGS 1060C	CHI*	CHM*
CIS 1000	CLP 1006	COP 1332	COP 1334
COP 2270	DAN 2130	DEP 2000	ECO 2013

GRADUATION REQUIREMENTS AND TRANSFER INFORMATION

EDF 1005	EDF 2085	EEX 2000	ENC 2300
ESC 1000	FRE*	FRW*	GEO 2420
GER*	GLY*	HBR*	HLP 1080
HLP 1081	HSC 2400	HUM 1020	HUN 1201
IND 1100	IND 1130	INR 2002	ISS 1120
ISS 1161	ISS 2270	ITA*	JPN*
LIT 2000	LIT 2120	LIT 2480	MAC*
MAD 2104	MAP*	MAS*	MET*
MGF*	MUH 2111	MUH 2112	MUL 1010
MUL 2380	OCE*	PCB 2033	PHI 2010
PHI 2604	PHY*	POR*	POS 2041
POS 2112	PSC*	PSY 2012	QMB 2100
REL 2300	RUS*	SPC 1017	SPN*
STA 2023	SYG 2000	SYG 2230	THE 2000
WOH 2012	WOH 2022	ZOO*	

COMPUTER COMPETENCY

By 16th earned college-level unit, students must attempt the computer competency requirement. By 31st earned college-level unit, students must satisfy the requirement (CGS1060C, CTS 0050, an equivalent college unit course or the Computer Skills Placement examination). For more information, see <http://bitly.com/UQIDHM>.

CIVIC LITERACY COMPETENCY

Prior to the award of an associate in arts or baccalaureate degree, first-time-in-college students entering a Florida College System institution in the 2018-19 school year, and thereafter must demonstrate competency in civic literacy. This requirement may be satisfied by passing AMH2020, POS2041, or an equivalent AP or CLEP exam.

FOREIGN LANGUAGE COMPETENCY

May be satisfied by Foreign Language Competency (FLC) standardized examinations

---OR---

ASL 1150C	CHI 1121	FRE 1121	GER 1121	HAI 1121
HBR 1121	ITA 1121	JPN 1121	POR 1121	RUS 1121
SPN 1121				

FIRST YEAR EXPERIENCE

SLS 1106 – First Year Experience Seminar (required course)

---OR---

one of the courses below based on advisor's recommendation:

- SLS 1502 – College Study Skills
- SLS 1505 – College Survival Skills
- SLS 1510 – Preparing for Student Success
- SLS 1125 – Student Support Seminar

ELECTIVES 24 Units

Elective courses should be selected by program and/or specialization. Refer the Common Prerequisites Manual or consult with an advisor or mentor. Also refer to information available at your Transfer Institution of choice. General education courses that are not used to meet general education requirements may be used for electives in this block.

60 UNITS REQUIRED FOR GRADUATION

General Education (36 credits):

15 units from State Core

21 units from MDC Core

Electives: 24 Units

Notes

*Includes any and all courses within associated prefix

**Requires grade of C or higher to satisfy requirement

***Meets Civics Literacy Competency

Gw = Gordon Rule writing and Gc = Gordon Rule computation

A minimum cumulative grade point average of 2.0 is required for graduation.

Students should check their individualized Degree Audit Report to determine the specific graduation policies in effect for their program of study for the year and term they entered Miami Dade. This outline includes current graduation requirements.

Course numbers, titles, descriptions, and listing are subject to change. Please consult the MDC Course Dictionary for updated information.

The final responsibility for meeting graduation requirements rests with the student.

MDC Advisement & Career Services Offices

Hialeah	Room 2101	305-237-8794
Homestead	Room A233	305-237-5046
Kendall	Room R243	305-237-2125
Medical	Room 1113	305-237-4141
North	Room 1104	305-237-1425
Padron	Room 1117	305-237-6133
Wolfson	Room 3117	305-237-3077
West	Room 2114	305-237-8947
Carrie Meek Ctr.	Room 1101	305-237-1903

Call Center

305-237-8888

mdcinfo@mdc.edu

Other Assessment Procedures for College-Level Communication and Computation Skills (6A-10.030) (often referenced as Gordon Rule)

A. In addition to assessments that may be adopted by

the State Board of Education or Board of Governors to measure student achievement in college-level communication and computation skills, other assessment requirements shall be met by successful completion of coursework in English and mathematics. For the purposes of this rule, a grade of C or higher shall be considered successful completion.

B. Prior to receipt of an Associate in Arts degree from a public community college or university or prior to entry into the upper division of a public university or college, a student shall complete successfully the following:

1. Six (6) semester hours of English coursework and six (6) semester hours of additional coursework in which the student is required to demonstrate college-level writing skills through multiple assignments. Each institution shall designate the courses that fulfill the writing requirements of this section. These course designations shall be submitted to the Statewide Course Numbering System. An institution to which a student transfers shall accept courses so designated by the sending institution as meeting the writing requirements outlined in this section.
2. Six (6) semester hours of mathematics coursework at the level of college algebra or higher. For the purposes of this rule, applied logic, statistics and other such computation coursework which may not be placed within a mathematics department may be used to fulfill three (3) hours of the six (6) hours required by this section.
3. (c) Students awarded college credit in English based on their demonstration of writing skills through dual enrollment, advanced placement, or international baccalaureate instruction pursuant to Rule 6A-10.024, F.A.C., and students awarded college credit based on their demonstration of mathematics skills at the level of college algebra or higher through one (1) or more of the acceleration mechanisms in Rule 6A-10.024, F.A.C., shall be considered to have satisfied the requirements in subsection 6A-10.030(2), F.A.C., to the extent of the college credit awarded.

C. Exemptions and Waivers. Any public community college or university desiring to exempt its students from the requirements of subsection 6A-10.030(2), F.A.C., shall submit an alternative plan to the Department of Education. Upon approval of the plan by the Department, the plan shall be submitted to the State Board of Education or the Board of Governors as appropriate. Upon approval by the State Board of Education or the Board of Governors, said plan shall be deemed effective in lieu of the requirements of subsection 6A-10.030(2), F.A.C.

Note: A list of MDC courses that fulfill this require-

ment, can be found at http://www.mdc.edu/asa/faculty/gordon_rule_courses.asp.

Advanced Technical Certificate Programs

Awarded to students who successfully complete a program of career and technical instruction consisting of nine (9) hours or more but less than forty-five (45) college credits of lower division and/or upper division courses. Florida College System institutions offering advanced technical certificates with upper division courses must be approved to offer baccalaureate programs containing those courses. An advanced technical certificate may be awarded to students who have already received an associate in science degree or an associate in applied science degree and are seeking an advanced specialized program of instruction to supplement their associate degree (information located at www.mdc.edu/academics/programs/default.aspx).

College Credit Certificate Programs

Awarded to students who successfully complete a program of career and technical instruction consisting of less than sixty (60) college credits which are part of an associate in science degree or an associate in applied science degree program and prepare students for entry into employment. The standard credit hour length of all technical certificate programs as defined in Rule 6A-6.0571, F.A.C. (information located at www.mdc.edu/academics/programs/default.aspx).

Career Technical Education Programs

Awarded to students who successfully complete a program of career and technical instruction consisting of clock hour courses to prepare for entry into employment. Upon satisfactory completion of a planned program of instruction, after the demonstration of the attainment of predetermined and specified performance requirements, the career and technical certificate shall be awarded. The standard clock hour length of all career and technical certificate programs as defined in Rule 6A-6.0571, F.A.C. (updated information located at www.mdc.edu/academics/programs/default.aspx).

Commencement (Graduation Ceremony)

Students who anticipate completing their program during the academic year should meet with an academic advisor



to ensure that all graduation requirements will be met. Also, students must apply for graduation by the deadlines published in the academic calendar. Students planning to graduate in spring or summer terms should note that the deadline is very early in the spring term. The commencement ceremony is held once a year, at the end of spring term (late April or early May). Caps and gowns are available at campus bookstores for those who have applied for graduation. There is no cost for these items.

Special Recognition for Outstanding Academic Performance (College Credit Students Only)

The College gives special recognition to students who demonstrate outstanding academic performance while working toward a degree. Students are eligible for the following recognition:

Dean's List – recognizes students who have a term combined cumulative GPA of 3.5 or above for 12 or more credits earned in the fall or spring term, and for 6 or more credits earned in the summer A or summer B terms.

Letter of Congratulations – the campus dean of faculty or equivalent sends a special letter of congratulations to students who earn a term grade point average of 4.0 for 12 or more credits earned in the fall or spring terms (excluding courses that do not satisfy degree requirements).

In addition, special designations are entered on transcripts of students awarded a degree program as follows:

Honors

A combined cumulative GPA of 3.5–3.69 is required to graduate with Honors.

Honors and Distinction

A combined cumulative GPA of 3.5–3.69 and at least 15 credits earned in honors courses is required to graduate with Honors and Distinction.

Highest Honors

To graduate with Highest Honors, a student must achieve a combined cumulative GPA of 3.7 or higher.

Highest Honors and Distinction

A combined cumulative GPA of 3.7 or higher and at least 15 credits earned in honors courses is required to graduate with Highest Honors and Distinction.

Phi Theta Kappa

To be eligible for induction into Phi Theta Kappa, the International Honor Society of the Two Year College, a student must have completed a minimum of 12 college-level credits leading to an Associate degree, with a minimum 3.5 combined cumulative GPA and the student must be currently enrolled. Upon graduation, initiated students will have the designation noted on their transcript.

Transfer Information

Transfer information and resources, including transfer agreements and transfer tips, can be found at: <http://www.mdc.edu/academics/transfer/default.aspx>.

Graduating with an Associate in Arts degree guarantees MDC graduates numerous transfer benefits. Certain Associate in Science/Associate in Applied Science degrees are also transferable to related baccalaureate degree programs. Additional information about transfer guarantees and agreements can be found in the Articulation section.

Miami Dade College offers baccalaureate degrees in



several areas of study: <http://www.mdc.edu/academics/programs/bachelors.aspx>. Students who meet the admissions criteria for these programs may apply at: <https://sisvsr.mdc.edu/admission/default.aspx>.

Campus Advisement & Career Services Offices offer students a variety of academic advising and career-related services. Students who are undecided about their academic major or career goals, or who are interested in a systematic investigation of the universities best suited for their needs, should visit the Advisement & Career Services Office at their campus.

Articulation

Articulation is a system designed to provide for smooth movement of students from high school, through the Florida College System and into a baccalaureate degree program at a State University, Florida College System institution, or other postsecondary institution. There are a number of articulation agreements which create special transfer opportunities for students (updated information located at www.mdc.edu/academics/transfer/default.aspx).

Articulation Agreements with Miami-Dade County Public Schools

Miami Dade College and Miami-Dade County Public Schools have entered into several articulation agreements. These range from the formalized New World School of the Arts and the School for Advanced Studies, to agreements for transfer of specific career pathways and adult vocational credits to Associate in Applied Science and Associate in Science degrees and certificate programs.

State of Florida Articulation Agreement

Section 1007.23, Florida Statutes, states the following:

- A. The State Board of Education and the Board of Governors shall enter into a statewide articulation agreement which the State Board of Education shall adopt by rule. The agreement must preserve Florida's "2+2" system of articulation, facilitate the seamless articulation of student credit across and among Florida's educational entities, and reinforce the provisions of this chapter by governing:
 - (a) Articulation between secondary and postsecondary education;
 - (b) Admission of Associate in Arts degree graduates from Florida College System institutions and state universities;
 - (c) Admission of applied technology diploma program graduates from Florida College System institutions or career centers;
 - (d) Admission of Associate in Science degree and Associate in Applied Science degree graduates from Florida College System institutions;
 - (e) The use of acceleration mechanisms, including nationally standardized examinations through which students may earn credit;
 - (f) General education requirements and statewide course numbers as provided for in ss. 1007.24 and 1007.25; and
 - (g) Articulation among programs in nursing.
- B. (a) The articulation agreement must specifically provide that every associate in arts graduate of a Florida College System institution shall have met all general education requirements and must be granted admission to the upper division of a:
 1. State university, except for a limited access or teacher certification program or a major program requiring an audition.
 2. Florida College System institution if it offers baccalaureate degree programs, except for a limited access or teacher certification program or a major program requiring an audition. (b) Florida College System institution Associate in Arts graduates shall

receive priority for admission to the upper division of a Florida College System institution or to a state university over out-of-state students. Orientation programs, catalogs, and student handbooks provided to freshman enrollees and transfer students at Florida College System institutions and state universities must include an explanation of this provision of the articulation agreement.

- C. To improve articulation and reduce excess credit hours, beginning with students initially entering a Florida College System institution in 2013-2014 and thereafter, the articulation agreement must require each student who is seeking an Associate in Arts degree to indicate a baccalaureate degree program offered by an institution of interest by the time the student earns 30 semester hours. The institution in which the student is enrolled shall inform the student of the prerequisites for the baccalaureate degree program.
- D. The articulation agreement must guarantee the statewide articulation of appropriate workforce development programs and courses between school districts and Florida College System institutions and specifically provide that every applied technology diploma graduate must be granted the same amount of credit upon admission to an Associate in Science degree or Associate in Applied Science degree program unless it is a limited access program. Preference for admission must be given to graduates who are residents of Florida.
- E. The articulation agreement must guarantee the statewide articulation of appropriate courses within Associate in Science degree programs to baccalaureate degree programs. Courses within an Associate in Applied Science degree program may articulate into a baccalaureate degree program on an individual or block basis as authorized in local interinstitutional articulation agreements.
- F. The articulation agreement must guarantee the articulation of 9 credit hours toward a postsecondary

degree in early childhood education for programs approved by the State Board of Education and the Board of Governors which: (a) Award a child development associate credential issued by the National Credentialing Program of the Council for Professional Recognition or award a credential approved under s. 1002.55(3) (c)1.b. or s. 402.305(3) (c) as being equivalent to the child development associate credential; and (b) Include training in emergent literacy which meets or exceeds the minimum standards for training courses for prekindergarten instructors of the Voluntary Prekindergarten Education Program in s. 1002.59.

Independent Colleges and Universities of Florida (ICUF)

There is also an articulation agreement between the Florida College System and the Independent Colleges and Universities of Florida (ICUF). Under the agreement, Florida College System graduates holding an Associate in Arts degree are guaranteed junior standing in any member institution, recognition of their completed general education core and the application of a minimum of 60 earned credit hours toward a baccalaureate degree.

Additional Agreements

In addition, Miami Dade College has developed several unique arrangements with local and out-of-state colleges and universities that make it possible for a student to apply for admission toward a baccalaureate degree. As a general rule, participating institutions will accept associate degree credits and work out a schedule for the additional bachelor's degree requirements. Miami Dade College also has agreements with universities that facilitate the transfer of MDC baccalaureate graduates to graduate programs. For additional information relating to articulation agreements, contact the Office of School and College Relations or visit <http://www.mdc.edu/academics/transfer/articulation.aspx>.

Academic Programs

Baccalaureate Degrees

Bachelor of Applied Science (B.A.S.)

Film, Television & Digital Production	73
Health Science - Physician Assistant Studies Concentration	74
Public Safety Management - Crime Scene Investigation Concentration	74
Public Safety Management - Criminal Justice Concentration	74
Public Safety Management - Emergency Management Concentration	74
Supervision and Management	74
Supervision and Management - Accounting Concentration	74
Supervision and Management - Hospitality Management Concentration	74
Supervision and Management - Human Resource Management Concentration	74
Supply Chain Management	74

Bachelor of Science (B.S.)

Biological Sciences - Biopharmaceutical Sciences Concentration	75
Biological Sciences - Biotechnology Concentration	75
Biological Sciences - Science Education Concentration	75
Cybersecurity	75
Data Analytics	75
Early Childhood Education	75
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Information Systems Technology - Applications Development Concentration	75
Information Systems Technology - Cybersecurity Concentration	76
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Secondary Mathematics Education	76
Secondary Science Education - Biology	76
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Associate in Arts Degree (AA)

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Architecture	77
Area & Ethnic Studies	78
Art or Art Education	78
Atmospheric Science & Meteorology	78
Biology	78

Biotechnology	78
Building Construction	78
Business Administration	78
Chemistry	78
Computer Arts Animation	78
Computer Information Systems	78
Computer Science	78
Criminal Justice Administration	79
Dance	79
Dietetics	79
Drama or Drama Education	79
Economics	79
Engineering - Architectural	79
Engineering - Biomedical	79
Engineering - Chemical	79
Engineering - Civil	79
Engineering - Computer	79
Engineering - Electrical	79
Engineering - Geomatics (Surveying and Mapping)	80
Engineering - Industrial	80
Engineering - Mechanical	80
Engineering - Ocean	80
English/Literature & English Education	80
Environmental Sciences	80
Exercise Science	80
Foreign Language	80
Forestry	80
Geology	80
Graphic or Commercial Arts	80
Health Services Administration	80
History	81
Hospitality Administration/Travel & Tourism	81
Interior Design	81
International Relations	81
Landscape Architecture	81
Mass Communications/Journalism	81
Mathematics	81
Music or Music Education	81
Philosophy	81
Physical Education Teaching & Coaching	81
Physics	82
Political Science	82
Pre-Bachelor of Arts	82
Pre-Law	82
Pre-Medical Science/Dentistry	82
Pre-Medical Technology	82
Pre-Nursing	82
Pre-Occupational Therapy	82
Pre-Optometry	82
Pre-Pharmacy	83
Pre-Physical Therapy	83
Pre-Veterinary Medicine	83
Psychology	83
Public Administration	83

Recreation	83
Religion	83
Social Work	83
Sociology	83
Speech Pathology & Audiology	84
Teaching (Elementary)	84
Teaching (Exceptional Student Education)	84
Teaching (Pre-Elementary/Early Childhood)	84
Teaching (Secondary)	84
Teaching Secondary (Biology)	84
Teaching Secondary (Chemistry)	84
Teaching Secondary (Earth/Space)	84
Teaching Secondary (English/Foreign Languages)	84
Teaching Secondary (Mathematics Education)	84
Teaching Secondary (Physics)	85
Teaching Secondary (Social Science)	85
Teaching Secondary (Vocational: Business, Technical, Home)	85

Associate in Science Degree (AS)

Accounting Technology	85
Animation & Game Art	85
Architectural Design & Construction Technology	85
Aviation Administration	86
Aviation Maintenance Management	86
Biomedical Engineering Technology	86
Biotechnology	86
Biotechnology - Bioinformatics	86
Biotechnology - Chemical Technology	86
Building Construction Technology	86
Business Administration	86
Business Intelligence Specialist	86
Civil Engineering Technology	87
Clinical Laboratory Sciences	87
Clinical Laboratory Sciences (Accelerated)	87
Clinical Laboratory Sciences (Part-Time)	87
Computer Crime Investigation	87
Computer Engineering Technology	87
Computer Information Technology	87
Computer Programming and Analysis - Business Applications Programming	87
Computer Programming and Analysis - Internet of Things (IoT) Applications	87
Computer Programming and Analysis - Mobile Applications Development	87
Crime Scene Technology - Crime Scene Investigation	88
Crime Scene Technology - Forensic Science	88
Criminal Justice Technology	88
Culinary Arts Management	88
Cybersecurity	88
Database Technology - Oracle Database Administration	88
Dental Hygiene	88
Diagnostic Medical Sonography Specialist	88
Drafting & Design Technology	88
Early Childhood Education	89
Early Childhood Education - Administrators	89
Early Childhood Education - Infant Toddler	89
Early Childhood Education - Preschool	89

Electronics Engineering Technology	89
Emergency Medical Services	89
Entrepreneurship	89
Fashion Design	89
Fashion Merchandising	89
Film Production Technology	89
Financial Services - Banking	90
Financial Services - Wealth Management	90
Financial Services - Mortgage Finance	90
Fire Science Technology	90
Funeral Services	90
Game Development & Design	90
Graphic Design Technology	90
Graphic Internet Technology	90
Health Information Technology	90
Health Information Technology (Accelerated)	91
Health Sciences	91
Histologic Technology	91
Hospitality & Tourism Management	91
Industrial Engineering Technology	91
Industrial Management Technology	91
Instructional Services Technology	91
Interior Design Technology	91
Landscape & Horticulture Technology	91
Marketing	92
Music Business - Business Management	92
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Networking Services Technology	92
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Physical Therapist Assistant	94
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ACADEMIC PROGRAMS

BACCALAUREATE DEGREES

The baccalaureate (or Bachelor's) degree is an upper-level degree for students who wish to pursue further education. Miami Dade College (MDC) offers the Bachelor of Science (B.S.) and the Bachelor of Applied Science (B.A.S.) in selected areas of study. All MDC baccalaureate programs are approved by the Florida Board of Education (FLDOE) and are accredited by the Commission on Colleges of the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC).

Note: All students must complete the MDC Bachelor's Application at www.mdc.edu/admissions and ensure that all admissions requirements are met (<https://sisusr.mdc.edu/admission/checker.aspx?type=N&babs=Y>).

General Education Requirement

All areas of General Education must be satisfactorily completed. Students must have an overall GPA of at least 2.0 in their General Education courses. Students must have a "C" or better in each course designated as "Gordon Rule."

Foreign Language Requirement

In accordance with Florida Administrative Code 6A10.02412 and pursuant to Florida Statute 1007.262, all baccalaureate degree-seeking students admitted to the baccalaureate degree program without meeting the Foreign Language Competence (FLC) must demonstrate competence prior to graduation.

Requirements for the Major

Departments are responsible for disseminating major requirements to students. Each candidate for the baccalaureate degree must complete requirements in their chosen major. The upper division major requirements consist of a minimum of thirty (30) semester hours. Visit www.mdc.edu/academics/programs/bachelors.aspx for specific requirements.

Dual Degree Versus a Double Major

Students should note that there is a difference between a double major (one degree, with a second major listed)

and a dual degree (second baccalaureate degree). A student completing multiple majors that have the same degree (e.g. Bachelor of Science or Bachelor of Applied Science), will receive a single degree. The transcript will list the degree plus each major.

- **Double Major** – To obtain a double major, students must meet all requirements of the school/department of the primary major but only the major requirements of the secondary major.
- **Dual Degree** – Students may receive a second baccalaureate degree provided that:
 1. the requirements for each major/ minor as well as individual college requirements for both the first and
 2. the second degrees are satisfied; and 30 semester hours in residence are completed, in addition to the hours required for the first degree. The additional 30 semester hours must be completed in residence after the completion of the first degree. Hours earned by the student during the completion of the first baccalaureate degree, over and above those extra credit hours actually required for the first degree, may not be included in the 30 semester hours. There are no General Education requirement for the second (dual) degree.

Bachelor of Applied Science (B.A.S.)

Film, Television & Digital Production

Bachelor of Applied Science | Code: P9220 | 120 credits

The Bachelor of Applied Science (B.A.S.) in Film, Television and Digital Production is a flexible baccalaureate program intended to accommodate the unique demands for entry and advancement in the media and entertainment sector. The B.A.S. program provides degree advancement opportunities for students with the Associate in Science in Film Production Technology and other Associate in Arts programs. Students learn advanced, practical, and hands-on training necessary in today's film, television and digital media production workforce. Guided by outstanding faculty and curricula, students further their knowledge in the latest technologies, giving them the experience to successfully achieve their academic goals and professional aspirations. Graduates will be prepared to gain immediate employment with film and/or television production companies as producers, directors, technical directors, production managers, camera operators, cinematographers, writers, researchers, editors and sound engineers, as well as be prepared for graduate school in digital media production.

Health Science - Physician Assistant Studies Concentration

Bachelor of Applied Science | Code: P9210 | 130 credits

The Bachelor of Applied Science with a major in Health Science - Physician Assistant Studies (concentration) is designed to address the critical shortage of healthcare professionals by providing graduates a continuance of technical, supervisory, and management skills necessary to meet workforce needs and labor market projections. Students will be provided with opportunities to develop discipline-specific medical skills and to expand their knowledge by participating in structured clinical experiences under the supervision of Physician Assistants and physicians.

Public Safety Management - Crime Scene Investigation Concentration

Bachelor of Applied Science | Code: P9106 | 120 credits

The four-year Bachelor of Applied Science degree is a workforce-driven baccalaureate degree in Public Safety Management designed to provide education and training, resulting in immediate employment possibilities for students in numerous careers in Public Safety. This comprehensive curriculum emphasizes critical thinking, analytical, written and oral communications, as well as research skills designed to prepare today's learners for entry-level, mid-management, and upper level supervisory positions within Public Safety agencies such as the FBI, DEA, ICE, U.S. Marshals Service, U.S. Secret Service and others.

Public Safety Management - Criminal Justice Concentration

Bachelor of Applied Science | Code: P9110 | 120 credits

The four-year Bachelor of Applied Science degree is a workforce-driven baccalaureate degree in Public Safety Management designed to provide education and training, resulting in immediate employment possibilities for students in numerous careers in Public Safety. This comprehensive curriculum emphasizes critical thinking, analytical, written and oral communications, as well as research skills designed to prepare today's learners for entry-level, mid-management, and upper level supervisory positions within Public Safety agencies such as the FBI, DEA, ICE, U.S. Marshals Service, U.S. Secret Service and others.

Public Safety Management - Emergency Management Concentration

Bachelor of Applied Science | Code: P9105 | 120 credits

The four-year Bachelor of Applied Science degree is a workforce-driven baccalaureate degree in Public Safety Management designed to provide education and training, resulting in immediate employment possibilities for students in numerous careers in Public Safety. This comprehensive curriculum emphasizes critical thinking, analytical, written and oral communications, as well as research skills designed to prepare today's learners for entry-level, mid-management, and upper level supervisory positions within Public Safety agencies such as the FBI, DEA, ICE, U.S. Marshals Service, U.S. Secret Service and others.

Supervision and Management

Bachelor of Applied Science | Code: P9200 | 120 credits

The Bachelor of Applied Science (BAS) degree in Supervision and Management prepares associate degree graduates from a variety of disciplines for work as a supervisor or manager. The program prepares students with the hands-on training necessary to meet the workforce demands of today and tomorrow while providing the skills needed to compete for advancement.

Supervision and Management - Accounting Concentration

Bachelor of Applied Science | Code: P9203 | 120 credits

The Bachelor of Applied Science (BAS) degree in Supervision and Management prepares students to meet the needs of a dynamic and global business environment with the abilities and skills to succeed as a manager or supervisor. In addition, students may complete the general degree or one of three concentrations in Accounting, Hospitality Management, or Human Resource Management.

Supervision and Management - Hospitality Management Concentration

Bachelor of Applied Science | Code: P9201 | 120 credits

The Bachelor of Applied Science (BAS) degree in Supervision and Management prepares students to meet the needs of a dynamic and global business environment with the abilities and skills to succeed as a manager or supervisor. In addition, students may complete the general degree or one of three concentrations in Accounting, Hospitality Management, or Human Resource Management.

Supervision and Management - Human Resource Management Concentration

Bachelor of Applied Science | Code: P9202 | 120 credits

The Bachelor of Applied Science (BAS) degree in Supervision and Management prepares students to meet the needs of a dynamic and global business environment with the abilities and skills to succeed as a manager or supervisor. In addition, students may complete the general degree or one of two concentrations in Hospitality Management or Human Resource Management.

Supply Chain Management

Bachelor of Applied Science | Code: P9300 | 120 credits

Supply chain management is an interdisciplinary field that emphasizes cross-functional integration of diverse business functions, facilities, and activities and seeks to manage those activities to enhance a company's competitive advantage. The Bachelor of Applied Science with a major in Supply Chain Management (BAS-SCM) is designed to provide knowledge of the supply chain while exploring the risks, operations, logistics, economics, regulatory issues, change management, forecasting, resource allocation, production planning, inventory management, customer delivery, after-sales support and service and other functions basic to business.

Bachelor of Science (B.S.)

Biological Sciences - Biopharmaceutical Sciences Concentration

Bachelor of Science | Code: S5201 | 120 credits

The Bachelor of Science (B.S.) in Biological Sciences is designed to provide students with a broad foundation in biology. Miami Dade College students will explore structure, function, genetics, and evolution of cells and organisms, while being provided the hands-on skills necessary to obtain jobs in the Biological/Life Science fields. Students take the core courses in biology, chemistry, physics and mathematics, and must meet the same General Education Requirements of all students seeking an AA degree. Students may choose from a variety of electives in science and general education to complete their degree requirements.

Biological Sciences - Biotechnology Concentration

Bachelor of Science | Code: S5200 | 120 credits

The Bachelor of Science (B.S.) in Biological Sciences is designed to provide students with a broad foundation in biology. Miami Dade College students will explore structure, function, genetics, and evolution of cells and organisms, while being provided the hands-on skills necessary to obtain jobs in the Biological/Life Science fields. Students take the core courses in biology, chemistry, physics and mathematics, and must meet the same General Education Requirements of all students seeking an AA degree. Students may choose from a variety of electives in science and general education to complete their degree requirements.

Biological Sciences - Science Education Concentration

Bachelor of Science | Code: S5202 | 120 credits

The Bachelor of Science (B.S.) in Biological Sciences is designed to provide students with a broad foundation in biology. Miami Dade College students will explore structure, function, genetics, and evolution of cells and organisms, while being provided the hands-on skills necessary to obtain jobs in the Biological/Life Science fields. Students take the core courses in biology, chemistry, physics and mathematics, and must meet the same General Education Requirements of all students seeking an AA degree. Students may choose from a variety of electives in science and general education to complete their degree requirements.

Cybersecurity

Bachelor of Science | Code: S9515 | 120 credits

The Bachelor of Science (BS) in Cybersecurity degree is designed to help meet the local need for cyber security professionals. Students in this program gain detailed understanding and hands-on skills regarding the tools and protocols needed to use and manage cybersecurity infrastructure, risks, and vulnerabilities in real-world situations. The program curriculum includes courses in network defense, penetration testing, computer and network forensics, risk management and ethics, among others. These courses prepare students

for multiple industry certifications such as Certified Ethical Hacker, Computer Hacking Forensics Investigator and Certified Information Security Manager.

Data Analytics

Bachelor of Science | Code: S5510 | 120 credits

The Bachelor of Science (BS) in Data Analytics program is designed to train and supply a workforce of skilled graduates in data manipulation and analysis across a spectrum of industries. Through the cross-disciplinary curriculum, students will learn to clean, organize, analyze, and interpret unstructured data, to derive knowledge and communicate discoveries using sophisticated visualization techniques. Students will demonstrate competence with fundamental algorithmic approaches to analyzing large data sets.

Early Childhood Education

Bachelor of Science | Code: S5400 | 120 credits

Upon completion of the Bachelor of Science Degree with a major in Early Childhood Education program, the student will be eligible to obtain a Florida Educator Certification in Pre-school (Birth to Age 4) and Pre-Kindergarten/ Primary (Age 3 to Grade 3) with endorsements in English for Speakers of Other Languages (ESOL), Reading, and Pre-Kindergarten Disabilities.

Electrical and Computer Engineering Technology

Bachelor of Science | Code: S5100 | 134 credits

The Bachelor of Science in Electrical and Computer Engineering Technology degree opens the door to a variety of engineering technology-related disciplines. The degree offers students practical, hands-on experience in engineering-related project management, teamwork and technical writing. The program prepares students for entry level engineering positions such as Electronics Engineers, Electrical Engineers, Computer Engineers, Project Engineers, Electronics Manufacturing Engineers, Quality Control Engineers, Field Engineers, and Sales Engineers.

Exceptional Student Education (K-12)

Bachelor of Science | Code: S4301 | 120 credits

The four-year baccalaureate degrees in Education are designed to prepare students to become teachers and pass state professional certification exams. An internship in a school setting is required to provide practical experience. The completer will earn a professional teaching certificate in Exceptional Student Education with endorsements in ESOL and Reading.

Information Systems Technology - Applications Development Concentration

Bachelor of Science | Code: S5501 | 120 credits

The Bachelor of Science (BS) in Information Systems Technology (IST) degree provides skills and knowledge essential to effectively support the design, planning and management of information infrastructures and information resources within diverse organizational settings. The Application Development concentration focuses on

designing and creating software. Students learn how to specify software requirements from clients and how to design, implement and validate software solutions for real-world problems.

Information Systems Technology - Cybersecurity Concentration

Bachelor of Science | Code: S5502 | 120 credits

The Bachelor of Science (BS) in Information Systems Technology (IST) degree provides skills and knowledge essential to effectively support the design, planning and management of information infrastructures and information resources within diverse organizational settings. The Cybersecurity concentration focuses on the threats faced by information systems. Students learn how to identify threats against an organization's digital assets, as well as the tools and methods to mitigate those threats. Upon completion of the program, the student will have learned to collect and analyze evidence from Windows and Linux computer systems and to footprint, scan, and enumerate networks.

Information Systems Technology - Networking Concentration

Bachelor of Science | Code: S5500 | 120 credits

The Bachelor of Science (BS) in Information Systems Technology (IST) degree provides skills and knowledge essential to effectively support the design, planning and management of information infrastructures and information resources within diverse organizational settings. The Networking Concentration focuses on how to plan, design, implement and maintain network infrastructures. Students will learn how to select the technologies that best suit the client's needs. Students will also learn how to install, maintain, and extend multi-user computer systems and how to develop administrative policies and procedures.

Secondary Mathematics Education

Bachelor of Science | Code: S4201 | 120 credits

The four-year baccalaureate degrees in Education are designed to prepare students to become teachers and pass state professional certification exams. An internship in a school setting is required to provide practical experience. The completer will earn a professional teaching certificate in Mathematics Education (gr.6-12).

Secondary Science Education - Biology

Bachelor of Science | Code: S4104 | 120 credits

The four-year baccalaureate degrees in Education are designed to prepare students to become teachers and pass state professional certification exams. An internship in a school setting is required to provide practical experience. The completer will earn a professional teaching certificate in Biology Education (gr.6-12).

Secondary Science Education - Chemistry

Bachelor of Science | Code: S4105 | 120 credits

The four-year baccalaureate degrees in Education are designed to prepare students to become teachers and pass state professional

certification exams. An internship in a school setting is required to provide practical experience. The completer will earn a professional teaching certificate in Chemistry Education (gr.6-12).

Secondary Science Education - Earth & Space Sciences

Bachelor of Science | Code: S4106 | 120 credits

The four-year baccalaureate degrees in Education are designed to prepare students to become teachers and pass state professional certification exams. An internship in a school setting is required to provide practical experience. The completer will earn a professional teaching certificate in Earth and Space Science Education (gr.6-12).

Secondary Science Education - Physics

Bachelor of Science | Code: S4107 | 120 credits

The four-year baccalaureate degrees in Education are designed to prepare students to become teachers and pass state professional certification exams. An internship in a school setting is required to provide practical experience. The completer will earn a professional teaching certificate in Physics Education (gr.6-12).

Bachelor of Science in Nursing (RN to BSN)

Bachelor of Science in Nursing | Code: N5100 | 125 credits

The Bachelor of Science in Nursing (BSN) is designed for licensed RNs with an A.S. degree in Nursing from regionally accredited programs who wish to attain the next level of education in order to provide professional nursing care in all clinical practice settings around the world, or to be eligible for advanced nursing leadership, management, staff education and practice positions, in a multicultural society.

Certificate of Professional Preparation (CPP)

Educator Preparation Institute

Certificate of Professional Preparation | Code: 69000 | 21 credits

The Educator Preparation Institute (EPI) is a state approved competency-based alternative certification program for individuals who have a bachelor's degree or higher in a discipline other than education and are currently teaching on a Temporary Teaching Certificate or who wish to enter the teaching profession. It focuses on the skills and competencies identified by the state as necessary for a high quality teacher to possess. Emphasis is placed on the Sunshine State Standards, teaching methods and strategies, the integration of technology into instructional practice, literacy development, assessment techniques and integration of technology into instructional practice, literacy development, assessment techniques and analysis of data, classroom management and school safety. At the completion of these modules the student will have successfully demonstrated the Florida Educator Accomplished Practices and have provided documentation of mastery in a comprehensive professional portfolio.

Instructional Design and Technology

Certificate of Professional Preparation | Code: CPP03 | 15 credits

This program is designed to provide baccalaureate-prepared students with the knowledge and skills necessary to work as instructional designers and technologists. Instructional designers and technologists may plan and conduct training for teachers related to teaching methods or the use of technology. Instructional designers and technologists oversee school curriculums and teaching standards. They develop instructional material, coordinate its implementation with teachers and principals, and assess its effectiveness.

Reading Endorsement

Certificate of Professional Preparation | Code: CPP02 | 15 credits

The Reading Endorsement is a Certificate of Professional Preparation that adds licensure to professionally certified teachers so that they can teach reading. This program meets the specifications in State Board Rule 6A-4.0292 for the Reading Endorsement.

ASSOCIATE IN ARTS DEGREE (AA)

Miami Dade College offers courses for a wide range of pathways in the Associate in Arts (AA) degree. The AA prepares students to enter the junior year at four-year upper-division colleges and universities.

Four-year institutions vary in the required number and nature of courses a student needs to take during the freshman and sophomore years. The State Common lower level course prerequisites have been identified for all baccalaureate majors. Students should see an advisor for additional information.

Students who have determined which profession or major they plan to pursue should become familiar with the requirements of the upper-division institutions. With the help of advisors and through using the degree audit, students may choose electives best suited for pursuit of a baccalaureate degree.

Students must be high school graduates or have a high school equivalency diploma (GED) to enroll in Associate in Arts courses.

Each pathway is comprised of courses specified by one or more of the universities in the SUS or by local private institutions. The first two years of these transfer programs contain specialized courses as prescribed by the respective university (refer to FLVC.org for the Common Prerequisite Manual information). All general education requirements are included. Students should be aware that credits earned in excess of the 60 credits required for graduation might not

be accepted for transfer by the upper-division university. Note: The AA does not prepare students to be eligible to take certification/licensure exams or to practice in the health care professions. Students may be awarded the AA degree only once, and students who have already earned a baccalaureate degree cannot be awarded an AA.

STUDENTS SHOULD CHECK THEIR INDIVIDUALIZED DEGREE AUDIT REPORT TO DETERMINE THE SPECIFIC GRADUATION POLICIES IN EFFECT. REQUIREMENTS MAY CHANGE BASED ON THE YEAR AND TERM A STUDENT ENTERS MIAMI DADE COLLEGE. THE DEGREE AUDIT REPORT INCLUDES CURRENT GRADUATION REQUIREMENTS. THE FINAL RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS STATED IN THE DEGREE AUDIT REPORT RESTS WITH THE STUDENT.

Accounting

Associate in Arts | Code: 10504 | 60 credits

This program offers fundamental instruction in accounting and related subjects (such as economics or business). Students who wish to become an accountant may transfer to senior colleges or universities that offer baccalaureate degrees in accounting. Accountants work in a variety of settings such as corporations, small businesses, financial institutions and government agencies.

Agriculture

Associate in Arts | Code: 10100 | 60 credits

Agriculture is the art, science and industry of managing the growth of plants and animals for human use. Study at MDC emphasizes a strong foundation in the sciences of biology (including botany), chemistry and/or physics. The range of careers in agriculture extends from rural farming to urban landscaping, with numerous specializations in areas such as hydroponics, agricultural engineering, animal husbandry, food packing and processing and soil chemistry.

Anthropology

Associate in Arts | Code: 12200 | 60 credits

Anthropology studies all aspects of human life by evaluating society, evolution and culture. Course offerings prepare the student in the four fields of the discipline: cultural anthropology, physical anthropology, anthropological linguistics and archaeology. Most anthropologists are researchers who work in museums or educational institutions. Students majoring in anthropology should plan to obtain the Ph.D. degree to fully succeed in the field.

Architecture

Associate in Arts | Code: 10200 | 60 credits

This program provides a foundation in areas such as architectural drawing, design and structure, as well as necessary courses in mathematics. Students may transfer to one of three universities in Florida that have accredited programs in architecture. An architect designs and oversees the construction or remodeling of buildings, working with engineers and contractors toward a prescribed goal.

Area & Ethnic Studies

Associate in Arts | Code: 10304 | 60 credits

The undergraduate major in area and ethnic studies is a flexible, interdisciplinary program that emphasizes the history, politics and literature of various groups. Students can concentrate in a specific area such as African-American/Black studies, American studies, Asian Studies, Jewish studies, Latin American studies, or Women's studies. These studies could lead to careers in sociology, political science, or academic work in areas such as comparative literature or history.

Art or Art Education

Associate in Arts | Code: 11000 | 60 credits

This program offers hands-on instruction in medias such as ceramics, jewelry making and metalsmithing, painting, photography, print making and sculpture. Additionally, the curriculum includes design, art history and education classes, so that students may work as artists or art teachers.

Atmospheric Science & Meteorology

Associate in Arts | Code: 11903 | 60 credits

To transfer to a four-year program in atmospheric science and meteorology, students must take science and math courses as well as introductory courses in meteorology. Job opportunities may include weather forecasting in aviation, marine or shipping companies, government agencies, and broadcasting or transportation industries. Additionally, meteorologists may work with other scientists researching phenomena such as volcanoes, hurricanes and global warming.

Biology

Associate in Arts | Code: 10400 | 60 credits

Biology, or life science, is the study of all aspects of living organisms, emphasizing the relationship of animals and plants to their environment. This program provides the first two years of a four-year curriculum for students planning to major in biology, botany, zoology, marine biology, ecological studies or microbiology. Biology majors may also enter professional schools in medicine, dentistry, veterinary medicine, optometry or podiatry.

Biotechnology

Associate in Arts | Code: 12207 | 60 credits

Biotechnology is the practice of using living organisms to make products or improve processes. It combines elements of biology, chemistry, engineering, and computing. This program provides the first two years of a four-year curriculum for students planning to major in biotechnology, biology, chemistry, or bioinformatics. Majors may also enter professional schools in related disciplines

Building Construction

Associate in Arts | Code: 10907 | 60 credits

This program is for students primarily interested in the construction of buildings rather than their architectural design. Coursework includes math and science subjects as well as courses in business and construc-

tion. A four-year degree in this program will prepare students to enter the building construction industry at the management level.

Business Administration

Associate in Arts | Code: 10503 | 60 credits

Business Administration includes courses in accounting, business law and finance, as well as more generalized courses in mathematics. Students may transfer to senior colleges or universities that offer baccalaureate degrees in business administration. Ultimately, graduates may work in the fields of banking, finance, marketing, information systems or real estate.

Chemistry

Associate in Arts | Code: 11901 | 60 credits

Chemistry is the science that investigates the composition, properties and change of properties of elementary forms of matter. In addition to coursework in chemistry, the A.A. is a science and math-intensive program that includes courses in botany, biology, physics, geometry and calculus. Chemists may work as researchers, analysts, or quality control specialists in companies that manufacture anything from pharmaceuticals to food products. Additionally, students may pursue careers in medicine, environmental science, chemical engineering or many other fields.

Computer Arts Animation

Associate in Arts | Code: 11005 | 60 credits

This program enables students develop creative and artistic skills conjunction with advanced computer skills. Studies include basic drawing and figure drawing, use of computer animation software and general education, well as evaluation of trends and standards in the animation industry for television and film.

Computer Information Systems

Associate in Arts | Code: 10702 | 60 credits

CIS focuses on the structure, management and control of information resources on computers. Coursework includes business and math classes, as well as courses in information systems and programming languages. Students transfer to four-year institutions and major in computer information systems, computer and information sciences, information sciences, or management information systems. Degrees lead to careers in systems analysis, computer application programming, database management, network services and IT support.

Computer Science

Associate in Arts | Code: 10703 | 60 credits

As the name suggests, Computer Science is a more science-intensive program than CIS. In addition to courses in programming and applications, the program provides a thorough grounding in mathematics, biology, chemistry and physics. Computer scientists design technical programs, do research, create new technologies, develop operating systems, code device drivers, write specialized programming languages and implement complex applications in a variety of settings. Computer Science requires skills in mathematics

and physics. Students must complete Calculus II and Physics with Calculus II before entering their junior year.

Criminal Justice Administration

Associate in Arts | Code: 12204 | 60 credits

In addition to coursework focusing on criminal justice and law, this program includes classes in history, sociology and political science. Thus, pre-law students will find this program suitable, as well as those seeking Bachelor's degrees in criminal justice. This program may lead to careers in law enforcement, corrections (including probation and parole), and security in private businesses or government.

Dance

Associate in Arts | Code: 11003 | 60 credits

Studio classes feature modern dance and ballet, and the program also includes theoretical courses. This curriculum meets the pre-professional and general education course requirements for transfer, but students should meet with an advisor to discuss the specific requirements of the four-year institution they plan to attend. Often, departments in four-year institutions will require an audition. This program is designed to prepare students pursuing careers in choreography or the performance of ballet and jazz or contemporary forms of dance. The program is also suited for students wishing to become teachers of dance.

Dietetics

Associate in Arts | Code: 11305 | 60 credits

This program provides the science education needed to transfer to a four-year program in dietetics. Chemistry, biology, anatomy and physiology are emphasized in this program. Dieticians and nutrition specialists may work as meal planners in institutions such as schools and hospitals, in the food products or health and fitness industry, or in a range of health and medical professions.

Drama or Drama Education

Associate in Arts | Code: 11002 | 60 credits

This is a comprehensive program in all aspects of theatrical production, including lighting, costuming, make-up and other aspects of stagecraft. Students participate in stage productions which are presented to the public throughout the academic year. While this program does provide the necessary coursework to transfer to a four-year institution, some departments in four-year colleges and universities will require an audition or portfolio, depending on the student's intended area of study. Careers in drama include education, theatrical production, casting, acting and a wide variety of stagecraft.

Economics

Associate in Arts | Code: 12201 | 60 credits

Economics is the study of how people produce, trade and consumer goods and services. The A.A. program emphasizes fundamental coursework in business and mathematics. While many students choose to obtain graduate degrees, economists with Bachelor's degrees can work in fields such as business economics and forecasting, urban real estate

and regional planning, analysis of markets and industrial regulation, management consulting and in banking and financial services.

Engineering - Architectural

Associate in Arts | Code: 10905 | 60 credits

Miami Dade College offers ten Engineering A.A. programs: architectural, chemical, civil, computer, electrical, industrial, mechanical, ocean, science, and surveying and mapping. Each has its own curriculum to best prepare students for transfer to a four-year institution. Interdisciplinary fields can include the study of biomechanics, kinesiology, nutrition and related areas.

Engineering - Biomedical

Associate in Arts | Code: 10904 | 60 credits

Miami Dade College offers ten Engineering A.A. programs: architectural, biomedical chemical, civil, computer, electrical, industrial, mechanical, ocean, and surveying and mapping. Each has its own curriculum to best prepare students for transfer to a four-year institution. Interdisciplinary fields can include the study of biomechanics, kinesiology, nutrition and related areas.

Engineering - Chemical

Associate in Arts | Code: 10906 | 60 credits

Miami Dade College offers ten Engineering A.A. programs: architectural, chemical, civil, computer, electrical, industrial, mechanical, ocean, science, and surveying and mapping. Each has its own curriculum to best prepare students for transfer to a four-year institution. Interdisciplinary fields can include the study of biomechanics, kinesiology, nutrition and related areas.

Engineering - Civil

Associate in Arts | Code: 10908 | 60 credits

Miami Dade College offers ten Engineering A.A. programs: architectural, chemical, civil, computer, electrical, industrial, mechanical, ocean, science, and surveying and mapping. Each has its own curriculum to best prepare students for transfer to a four-year institution. Interdisciplinary fields can include the study of biomechanics, kinesiology, nutrition and related areas.

Engineering - Computer

Associate in Arts | Code: 10705 | 60 credits

Miami Dade College offers ten Engineering A.A. programs: architectural, chemical, civil, computer, electrical, industrial, mechanical, ocean, science, and surveying and mapping. Each has its own curriculum to best prepare students for transfer to a four-year institution. Interdisciplinary fields can include the study of biomechanics, kinesiology, nutrition and related areas.

Engineering - Electrical

Associate in Arts | Code: 10910 | 60 credits

Miami Dade College offers ten Engineering A.A. programs: architectural, chemical, civil, computer, electrical, industrial, mechanical, ocean, science, and surveying and mapping. Each has its own cur-

riculum to best prepare students for transfer to a four-year institution. Interdisciplinary fields can include the study of biomechanics, kinesiology, nutrition and related areas.

Engineering - Geomatics (Surveying and Mapping)

Associate in Arts | Code: 10909 | 60 credits

Miami Dade College offers ten Engineering A.A. programs: architectural, chemical, civil, computer, electrical, industrial, mechanical, ocean, science, and surveying and mapping. Each has its own curriculum to best prepare students for transfer to a four-year institution. Interdisciplinary fields can include the study of biomechanics, kinesiology, nutrition and related areas.

Engineering - Industrial

Associate in Arts | Code: 10912 | 60 credits

Miami Dade College offers ten Engineering A.A. programs: architectural, chemical, civil, computer, electrical, industrial, mechanical, ocean, science, and surveying and mapping. Each has its own curriculum to best prepare students for transfer to a four-year institution. Interdisciplinary fields can include the study of biomechanics, kinesiology, nutrition and related areas.

Engineering - Mechanical

Associate in Arts | Code: 10911 | 60 credits

Miami Dade College offers ten Engineering A.A. programs: architectural, chemical, civil, computer, electrical, industrial, mechanical, ocean, science, and surveying and mapping. Each has its own curriculum to best prepare students for transfer to a four-year institution. Interdisciplinary fields can include the study of biomechanics, kinesiology, nutrition and related areas.

Engineering - Ocean

Associate in Arts | Code: 10913 | 60 credits

Miami Dade College offers ten Engineering A.A. programs: architectural, chemical, civil, computer, electrical, industrial, mechanical, ocean, science, and surveying and mapping. Each has its own curriculum to best prepare students for transfer to a four-year institution. Interdisciplinary fields can include the study of biomechanics, kinesiology, nutrition and related areas.

English/Literature & English Education

Associate in Arts | Code: 11500 | 60 credits

English/Literature is the study of great written works and how they were shaped by historical and cultural events. This program also includes education courses to prepare students for careers as teachers. However, students who graduate with a Bachelor's degree in English are equipped to work in publishing, and may be qualified to work as a writer in virtually any field.

Environmental Sciences

Associate in Arts | Code: 10203 | 60 credits

Environmental Science examines environmental issues from both ecological and sociological standpoints. Thus, it is an interdisciplinary

major which combines life sciences, social sciences and the humanities. Students at MDC take mostly science and mathematics courses to prepare for transfer into a baccalaureate program. This field is projected to grow in the 21st century, as the need for environmental researchers, analysts, engineers and journalists will grow.

Exercise Science

Associate in Arts | Code: 12103 | 60 credits

Exercise Science studies the relationship of physical exercise to human health and disease prevention. This program at MDC prepares students for transfer with coursework in human anatomy and physiology, nutrition, health and exercise. Exercise science is a growing field with professionals working in diverse settings, such as hospitals and health clubs, research facilities and sports teams. Specialists also work in corporate, industrial and educational environments.

Foreign Language

Associate in Arts | Code: 10301 | 60 credits

Foreign language programs train students to achieve reading, writing and verbal fluency in one or more foreign languages. The demand for interpreters, translators and language instructors is projected to grow in the 21st century, and graduates with Bachelor's degrees can work almost anywhere in the world for corporations, businesses, governments, nonprofit agencies or schools.

Forestry

Associate in Arts | Code: 10101 | 60 credits

Forestry studies the ecology and economy of forest management. Students should be aware that the University of Florida is the only in-state university offering this program, with majors in forest resources, and conservation and urban forestry. Foresters manage, develop, and protect woodlands and their resources (timber, water, wildlife, forage and recreational areas).

Geology

Associate in Arts | Code: 11904 | 60 credits

Geologists study the structure, composition and history of the Earth. This program provides basic coursework in geology, calculus, biology and chemistry. Some examples of employers of geologists include agencies targeting pollution or urban waste, corporations searching for new sources of petroleum or natural gas and research organizations studying volcanoes or earthquakes.

Graphic or Commercial Arts

Associate in Arts | Code: 11004 | 60 credits

Graphic Arts emphasizes studio courses in design, drawing and digital techniques. Graduates may work in advertising agencies, design studios, exhibit and display businesses, department stores and industrial organizations.

Health Services Administration

Associate in Arts | Code: 11200 | 60 credits

This program provides the fundamental science coursework for transfer to a baccalaureate program in health services administration. The Baccalaureate degree prepares students for entry-level management positions in health services delivery organizations. Persons licensed in clinical health often pursue this degree, as do medical care professionals who do not have an undergraduate degree. The Baccalaureate also prepares individuals for graduate study in this field.

History

Associate in Arts | Code: 12202 | 60 credits

History is the study of the events, patterns and cycles that have shaped our present world. Depending on the area of specialization, history may examine political events, social evolution, cultural developments or a combination of these. The two-year program at MDC prepares students for transfer with courses in American, African-American and Latin American history, and surveys of American, English and world literature. Professional historians (e.g. museum curators and educators) tend to pursue the Doctoral degree, but the Bachelor's degree in history can prepare students for graduate work in law or political science, and apply to careers requiring good writing or analytical skills.

Hospitality Administration/Travel & Tourism

Associate in Arts | Code: 10506 | 60 credits

This field combines traditional business and management education with training specific to the tourism, travel and hospitality industries. Careers in the hospitality/travel and tourism industry include hotel and restaurant management, and managerial positions with cruise ships, airlines, land-based tourism companies, as well as travel agencies.

Interior Design

Associate in Arts | Code: 10201 | 60 credits

Interior Design studies combine architecture, art and design courses, training the student to understand the relation of interior spaces to the total design of structures (including architecture, landscaping and lighting. An interior designer encounters a variety of challenging work, available in professional, institutional and private settings.

International Relations

Associate in Arts | Code: 12205 | 60 credits

Students can obtain the coursework necessary to transfer to four-year programs in international relations, a major which usually includes political science and economics courses. Employment opportunities are available at the baccalaureate level in business, government, journalism and political organizations. Many students, however, go on to pursue graduate work or law school.

Landscape Architecture

Associate in Arts | Code: 10202 | 60 credits

The A.A. in Landscape Architecture prepares students for transfer by offering courses in architecture, horticulture and botany.

Landscape architects plan the arrangement of outdoor areas for public use and enjoyment, making recommendations for the types and location of plantings, circulation, drainage and other harmonizing improvements with existing land features and architectural structures. The University of Florida offers the only in-state program in landscape architecture.

Mass Communications/Journalism

Associate in Arts | Code: 10600 | 60 credits

Mass Communication examines the role of media in society. Coursework includes media criticism and analysis, U.S. history and government, sociology, and a study of the broadcast, cable and Internet industries. Depending upon the student's area of interest, study may also include journalism, and television and radio production. A Bachelor's in mass communication equips one to work in journalism, corporate communication, or in certain business or managerial positions in television or radio.

Mathematics

Associate in Arts | Code: 11700 | 60 credits

The Mathematics A.A. emphasizes math and science training, and includes coursework in computer programming. Mathematics is both a science and a tool essential for many kinds of work in industry and business. As a result, employment opportunities for graduates trained in mathematics have expanded rapidly in industries such as aviation and communications, sciences such as oceanography and meteorology, and government agencies such as the U.S. Census Bureau.

Music or Music Education

Associate in Arts | Code: 11001 | 60 credits

Music or Music Education students must be proficient in music theory and music history as well as be a skilled performer. Careers in music include individual and group performance, conducting, composing and teaching. Music graduates may also have jobs working in ancillary professions such as retail, publishing and recording.

Philosophy

Associate in Arts | Code: 11502 | 60 credits

Philosophy investigates the fundamental principles of being, knowledge or conduct. There are numerous systems of philosophical discourse and the two-year program introduces students to many of these. Unless a student wishes to earn a Doctorate and teach at the college level, a Bachelor's degree in philosophy is generally useful only in indirect ways. It can prepare students for graduate work in other fields such as law or theology, and the study of philosophy usually sharpens a student's analytic skills.

Physical Education Teaching & Coaching

Associate in Arts | Code: 10817 | 60 credits

This program is designed for students interested in pursuing careers in physical education at the pre-school, elementary, secondary, college or community program level. This curriculum meets the pre-pro-

professional and "General Education" course requirements for transfer, but due to variations in prerequisites, students should confer with a departmental advisor. Employment opportunities include teaching, coaching, sports communications, sports psychology, sports history, sports sociology and sports medicine. Target populations include the able-bodied, physically limited and aged, and the environments include educational, governmental, public and/or private settings.

Physics

Associate in Arts | Code: 11900 | 60 credits

Physics is the study of the motion and force of energy and matter. This science is applied to different kinds of energy and matter, as in thermodynamics, astrophysics, nuclear physics and wave motion analysis. The A.A. coursework provides a fundamental education in mathematics and science topics so that students may transfer to pursue their area of interest. Careers in research are available both in government agencies and private industries, as well as in educational institutions, though in most cases graduate degrees are required.

Political Science

Associate in Arts | Code: 12206 | 60 credits

Political science examines the role and effects of government actions on society. The A.A. program prepares students for transfer with coursework in history, literature, economics and government. Political scientists may work in various government jobs, or may work as lobbyists, researchers, political analysts or journalists. In addition to graduate work in the field, a Bachelor's degree in political science also prepares students for law school.

Pre-Bachelor of Arts

Associate in Arts | Code: 14902 | 60 credits

The Pre-Bachelor of Arts program at MDC is designed for students who seek a general degree program and greater freedom to explore intellectual fields of their particular interest. This program challenges students to assume major responsibility for the direction of their own education. The program also provides a broader range of educational opportunities than in specialized programs. At the upper division, a major theme or area of concentration is usually required.

Pre-Law

Associate in Arts | Code: 11400 | 60 credits

Although no specific area of study is mandatory for the Pre-Law major, the MDC program offers courses in criminal justice, government, history and business to best prepare a student for future coursework. Students should work with an advisor to determine the best four-year degree to pursue.

Pre-Medical Science/Dentistry

Associate in Arts | Code: 11211 | 60 credits

This program is designed to meet the first two years of required courses for students planning careers in medicine and dentistry. Pre-

medical education should include a foundation in chemistry, biology, mathematics, and physics, as well as a broad education in the humanities and social sciences. This program enables the student to transfer to colleges or universities that offer a Baccalaureate degree in physician assistant (PA), or other pre-medical degrees such as biology. Admission to a professional school is dependent upon academic coursework and scores on a national test. Applicants should have a minimum "B" average.

Pre-Medical Technology

Associate in Arts | Code: 11209 | 60 credits

This program provides the science coursework necessary to transfer to a four-year baccalaureate program. Students must transfer to an upper-division institution for the third year. Generally, the fourth year is spent in a clinical setting, usually in a hospital where students learn laboratory techniques. Members of this profession work in clinical laboratories performing the wide variety of tests which aid physicians in the diagnosis and treatment of patients. Most medical technologists work in hospitals, physician's public health laboratories, universities, or in industry.

Pre-Nursing

Associate in Arts | Code: 11203 | 60 credits

The A.A. degree does not prepare students to be eligible to take certification/licensure exams or to practice in the Nursing profession. This program includes the pre-professional courses necessary for admission to a Bachelor of Science degree program in nursing (BSN). The first two years at the community college level consist of general education and science courses. The professional nursing courses are taken in the last two years at the upper division. Upper-division programs are limited access, require an above average academic record, and have widely differing pre-professional course requirements. Therefore, students are advised to check with the Nursing Department of the senior institution they wish to attend. Most upper-division programs also offer a track for registered nurses (RNs) completing an Associate in Science degree to earn a BSN degree.

Pre-Occupational Therapy

Associate in Arts | Code: 11204 | 60 credits

Occupational therapists use creative/recreational activities and manual skills to evaluate and treat physical and mental illnesses. The A.A. prepares students for transfer by offering courses in human anatomy and physiology, human behavior, growth and development, along with more basic science courses. Employment possibilities include civilian, military, and government hospitals, rehabilitation centers, long-term and extended care facilities, community mental health centers, and clinics for the physically limited.

Pre-Optometry

Associate in Arts | Code: 11205 | 60 credits

This program provides the fundamental science coursework necessary to transfer to a four-year institution, where students can obtain

a degree in an appropriate field, such as biology. To be an optometrist, one must earn the Doctor of Optometry professional degree. A Bachelor's degree with a strong science background is required for admission. Graduates must pass a state licensure exam in order to practice. Optometrists prescribe glasses, contact lenses and visual therapy, and offer non-surgical treatment of eye diseases and the rehabilitation of patients with visual disabilities

Pre-Pharmacy

Associate in Arts | Code: 11206 | 60 credits

The Pre-Pharmacy program provides the math and science education needed to transfer to a baccalaureate program. Career opportunities in pharmacy include positions in a hospital or institutional pharmacy, in industry or manufacturing, in a retail or clinical pharmacy, in government service, in pharmacy administration, in laboratories and in pharmaceutical journals.

Pre-Physical Therapy

Associate in Arts | Code: 11207 | 60 credits

The A.A. degree does not prepare students to be eligible to take certification/licensure exams or to practice in the Physical Therapy profession. This program prepares students for transfer by providing intensive coursework in mathematics and science. Most upper-division programs have selective admissions and transfer requirements vary, so students should work with an advisor in planning a program of study. Physical therapists (PTs) are movement experts who improve quality of life through prescribed exercise, hands-on care, and patient education. After making a diagnosis, physical therapists create personalized treatment plans that help their patients improve mobility, manage pain and other chronic conditions, recover from injury, and prevent future injury and chronic disease. (www.APTA.org). They work in healthcare settings such as hospitals, home care, nursing homes, and outpatient facilities.

Pre-Veterinary Medicine

Associate in Arts | Code: 11208 | 60 credits

Veterinary medicine is the study of the diagnosis, treatment and control of disease and injuries among animals. Veterinarians may specialize in the health and breeding of certain animals, performing surgery, prescribing and administering drugs and vaccines, and research. Veterinarians may also concentrate on the inspection of meat, poultry and other foods as part of federal and state public health programs. The University of Florida is the only state school that offers a veterinary program.

Psychology

Associate in Arts | Code: 12001 | 60 credits

Psychology is the science of human behavior and mental processes that affect mental and physical health. A.A. coursework covers the science and mathematics subjects needed to transfer to a four-year institution. While the Bachelor's degree in psychology could be useful in a number of careers, professional psychologists must continue to graduate study,

Employment opportunities with a Doctorate or a Masters' degree include teaching or counseling in a wide variety of settings.

Public Administration

Associate in Arts | Code: 12100 | 60 credits

This is an interdisciplinary program gearing the combined study of business, government and economics toward a career in the public sector. Although some students pursue graduate degrees, those with Bachelor's degrees may obtain work managing budgets, or developing programs and policies in government, education and nonprofit settings.

Recreation

Associate in Arts | Code: 12101 | 60 credits

To prepare for upper-division work in recreation, students take courses in accounting, economics, and human anatomy and physiology, and health sciences. This curriculum meets the pre-professional and general education course requirements for transfer, but due to variations in upper-division requirements, students should confer with an advisor. Recreation professionals often work in youth agencies, but may also develop careers in industries such as healthcare, fitness, and travel and tourism.

Religion

Associate in Arts | Code: 11503 | 60 credits

Religion majors may compare religions of the world, study the inherent values of various religions, examine the impact of religion on culture and society and explore one religious system in depth. The two-year curriculum offers basic coursework in world and western religions, as well as an array of history courses. Students who obtain the Bachelor's degree may pursue graduate theological studies or a ministerial career or they may seek work immediately in a religious organization.

Social Work

Associate in Arts | Code: 12102 | 60 credits

This program prepares students for upper-division education in social work by offering courses in science and sociology. Social workers provide the link between organized social services and individuals and families unable to provide for themselves or needing assistance in problem solving. Potential employers include hospitals, mental health centers, rehabilitation centers, government agencies, schools and correctional institutions.

Sociology

Associate in Arts | Code: 12203 | 60 credits

Sociology is the systematic study of human interaction, that is, society, social relationships, social structures and social change. Coursework emphasizes liberal arts topics such as literature, cultural anthropology, theatre appreciation and history, as well as introductory courses in sociology. Graduates with a Bachelor's degree can work within community organizations, government agencies and the criminal justice field. Many students go on to pursue graduate degrees and work in social policy, public administration, law, government or social services.

Speech Pathology & Audiology

Associate in Arts | Code: 11501 | 60 credits

This program provides fundamental coursework in biology and communications so that students may transfer to a four-year institution. The curriculum leading to the Baccalaureate degree is usually designed as pre-professional education for a graduate program. Speech language pathologists and audiologists provide clinical services to individuals with speech, language and hearing impairments. Eligibility for the Certificate of Clinical Competence from the American Speech-Language-Hearing Association and state licensure are not possible until requirements for the graduate degree are met.

Teaching (Elementary)

Associate in Arts | Code: 10802 | 60 credits

This program prepares students to major in elementary education by presenting the general education and education curriculum necessary to earn a baccalaureate degree. This AA can be used for transfer to Florida colleges and universities. Areas of specialization include elementary, pre-elementary/early childhood, exceptional student, and secondary education. Students should work with an advisor to determine the appropriate coursework for transfer into their intended area of study.

Teaching (Exceptional Student Education)

Associate in Arts | Code: 10804 | 60 credits

This program prepares students to major in exceptional student education by presenting the general education courses and education curriculum necessary to earn a baccalaureate degree. This AA can be used for transfer to Florida colleges and universities or for MDC's BS in Exceptional Student Education. Areas of specialization include elementary, pre-elementary/early childhood, exceptional student and secondary education. Students should work with an advisor to determine the appropriate coursework for transfer into their intended area of study.

Teaching (Pre-Elementary/Early Childhood)

Associate in Arts | Code: 10809 | 60 credits

This program prepares students to major in early childhood education (birth to age 4) by presenting the general education and early childhood and education curriculum necessary to earn a baccalaureate degree. This AA can be used for transfer to Florida colleges and universities. Areas of specialization include elementary, pre-elementary/early childhood. Students should work with an advisor to determine the appropriate coursework for transfer into their intended area of study.

Teaching (Secondary)

Associate in Arts | Code: 10810 | 60 credits

This program prepares students to major in various subject areas in education by offering the general education and education courses necessary for transfer to earn a baccalaureate degree. This AA can be used for transfer to Florida colleges and universities. Available areas of specialization in secondary education are biology, chemistry,

earth/space science, English and foreign language, mathematics, physics and social science. Additionally, a specialization in vocational secondary education is available. This includes agriculture, business, home economics and technical coursework. A curriculum appropriate to each area of specialization is featured in the specific A.A. program. Students should work with an advisor to determine the appropriate coursework for transfer into their intended area of study.

Teaching Secondary (Biology)

Associate in Arts | Code: 10815 | 60 credits

This program prepares students to major in secondary biology education by presenting the science, general education and education curriculum necessary to earn a baccalaureate degree. This AA can be used for transfer to Florida colleges and universities. Students should work with an advisor to determine the appropriate coursework for transfer into their intended area of study.

Teaching Secondary (Chemistry)

Associate in Arts | Code: 10814 | 60 credits

This program prepares students to major in secondary chemistry education by presenting the science, general education and education curriculum necessary to earn a baccalaureate degree. This AA can be used for transfer to Florida colleges and universities. A curriculum appropriate to each area of specialization is featured in the specific A.A. program. Students should work with an advisor to determine the appropriate coursework for transfer into their intended area of study.

Teaching Secondary (Earth/Space)

Associate in Arts | Code: 10813 | 60 credits

This program prepares students to major in secondary earth/space science education by presenting the science, general education and education curriculum necessary to earn a baccalaureate degree. This AA can be used for transfer to Florida colleges and universities. Students should work with an advisor to determine the appropriate coursework for transfer into their intended area of study.

Teaching Secondary (English/Foreign Languages)

Associate in Arts | Code: 10808 | 60 credits

This program prepares students to major in secondary foreign language education by presenting the general education and education curriculum necessary to earn a baccalaureate degree. This AA can be used for transfer to Florida colleges and universities. Students should work with an advisor to determine the appropriate coursework for transfer into their intended area of study.

Teaching Secondary (Mathematics Education)

Associate in Arts | Code: 10812 | 60 credits

This program prepares students to major in secondary mathematics education by presenting the mathematics, general education, and education curriculum necessary to earn a baccalaureate degree. This AA can be used for transfer to Florida colleges and universities.

Students should work with an advisor to determine the appropriate coursework for transfer into their intended area of study.

Teaching Secondary (Physics)

Associate in Arts | Code: 10816 | 60 credits

This program prepares students to major in physics education by presenting the science, general education and education curriculum necessary to earn a baccalaureate degree. This AA can be used for transfer to Florida colleges and universities. Students should work with an advisor to determine the appropriate coursework for transfer into their intended area of study.

Teaching Secondary (Social Science)

Associate in Arts | Code: 10806 | 60 credits

This program prepares students to major in secondary social science education by presenting the general education and education curriculum necessary to earn a baccalaureate degree. This AA can be used for transfer to Florida colleges and universities. Students should work with an advisor to determine the appropriate coursework for transfer into their intended area of study.

Teaching Secondary (Vocational: Business, Technical, Home)

Associate in Arts | Code: 10803 | 60 credits

This program prepares students to major in vocational education by presenting the general education and education curriculum necessary to earn a baccalaureate degree. This AA can be used for transfer to Florida colleges and universities. Areas of specialization agriculture, business, home economics and technical coursework. Students should work with an advisor to determine the appropriate coursework for transfer into their intended area of study.

ASSOCIATE IN SCIENCE DEGREE (AS)

The two-year Associate in Science (AS) degree is designed for individuals looking for specialized study at the college level leading to immediate entry into a career upon graduation. The A.S. degree programs are comprised mostly of courses directly related to the identified career area. The remaining courses are comprised of general education courses such as English, oral communications, math/science, behavioral/social science and humanities.

Upon successful completion of all MDC and program requirements, students may be awarded multiple AS degrees as appropriate, provided the degrees do not share the same classification of instructional program (CIP) code.

Several of the AS degree programs are covered by a statewide articulation agreement that allows transfer to the corresponding bachelor's degree program at Florida public universities (refer to FLVC.org for the Statewide Articulation Manual information). In addition, many of the other AS degree programs have established articulation agreements with selected universities.

The general education component of the AS degree is transferable to the upper divisions. Health Science & Nursing programs are offered at the Medical Campus. Any students interested in any of the

Health Science programs are encouraged to consult advisors in the New Student Center to receive the most current information regarding program admission.

STUDENTS SHOULD CHECK THEIR INDIVIDUALIZED DEGREE AUDIT REPORT TO DETERMINE THE SPECIFIC GRADUATION POLICIES IN EFFECT. REQUIREMENTS MAY CHANGE BASED ON THE YEAR AND TERM A STUDENT ENTERS MIAMI DADE COLLEGE. THE DEGREE AUDIT REPORT INCLUDES CURRENT GRADUATION REQUIREMENTS. THE FINAL RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS STATED IN THE DEGREE AUDIT REPORT RESTS WITH THE STUDENT.

Accounting Technology

Associate in Science | Code: 25022 | 60 credits

The Accounting Technology program is designed mainly for students who intend to seek immediate employment in the field of accounting and for those presently employed in business but seeking advancement. Completion of this program prepares the student for employment as a paraprofessional in the accounting field. Instruction emphasizes accounting competencies required at the entry-level while also providing the student with a broad business overview and the required general education courses. The Associate in Arts degree is also available to the student planning to transfer to a senior institution after graduation from Miami Dade College. Please consult a business advisor about additional courses for such plans.

Animation & Game Art

Associate in Science | Code: 25074 | 60 credits

The Animation & Game Art is an intensive hands on program in which students learn narrative structure along with technical skills required in the animation industry. Students learn character design and animation, 3D modeling, storyboarding and environment design. Graduates are prepared for entry level jobs as 3D artist and animators.

Architectural Design & Construction Technology

Associate in Science | Code: 26034 | 66 credits

The Architectural Design and Construction Technology program offers courses that enable the student to translate the design and systems of the architect into graphic and written form and assists

the professional in rendering architectural services. The attainment of these skills qualifies the student for several specialties, such as, architectural drafting, cost estimating, material selecting, specification writing and preparing presentations, drawings & models.

Aviation Administration

Associate in Science | Code: 26028 | 60 credits

The Aviation Administration program is designed to prepare students to succeed in the dynamic aviation industry. The program focuses on the necessary entry-level skills for most aviation employment fields. The Air Traffic Control option provides students with the opportunity to be hired with the Federal Aviation Administration (FAA). Accordingly, graduates find opportunities in airline sales and reservations, air cargo, airport operations and many data-entry positions required by the airline management. Contact the Aviation Department at (305) 237-5950 for information and advisement.

Aviation Maintenance Management

Associate in Science | Code: 26027 | 83 credits

The Aviation Maintenance Management is a special program in which 45 semester hours are awarded to students who possess the Federal Aviation Administration Aircraft and Powerplant (A & P) certificate. The 38 additional required credits consist of general education and aviation requirements needed by the licensee for the Associate in Science degree. Contact the Aviation Department at (305) 237-5950 for information and advisement.

Biomedical Engineering Technology

Associate in Science | Code: 26053 | 62 credits

The Biomedical Engineering Technology program prepares students for employment as Biomedical Engineering Technicians/Technologists and in related occupations in health-related fields. The program also provides supplemental training for persons currently or previously employed in these occupations. The program focuses on the understanding and applying of concepts in electronics, in addition to troubleshooting techniques, to digital, microprocessor, or computer-based systems as they relate to medical devices. Assembly, installation, operations maintenance, calibration, trouble-shooting, repairing and elementary design on medical systems are taught using an integrated, applied and theoretical approach.

Biotechnology

Associate in Science | Code: 22027 | 61 credits

The Biotechnology Program will expose students to a breadth of topics and emphasizes hands-on learning in a variety of techniques and procedures necessary for employment in the bioscience industry. The Program includes modules designed to enhance critical thinking and technical communication skills. It focuses on developing broad transferable skills and stresses understanding and demonstration of laboratory/industry protocols and regulations, bio-safety and safe operating procedures, ethical and environmental issues, product generation/formulation, quality control, validation, instrumentation, and computing.

Biotechnology - Bioinformatics

Associate in Science | Code: 22028 | 61 credits

The Biotechnology Program will expose students to a breadth of topics and emphasizes hands-on learning in a variety of techniques and procedures necessary for employment in the bioscience industry. The Program includes modules designed to enhance critical thinking and technical communication skills. It focuses on developing broad transferable skills and stresses understanding and demonstration of laboratory/industry protocols and regulations, bio-safety and safe operating procedures, ethical and environmental issues, product generation/formulation, quality control, validation, instrumentation, and computing.

Biotechnology - Chemical Technology

Associate in Science | Code: 22029 | 61 credits

The Biotechnology Program will expose students to a breadth of topics and emphasizes hands-on learning in a variety of techniques and procedures necessary for employment in the bioscience industry. The Program includes modules designed to enhance critical thinking and technical communication skills. It focuses on developing broad transferable skills and stresses understanding and demonstration of laboratory/industry protocols and regulations, bio-safety and safe operating procedures, ethical and environmental issues, product generation/formulation, quality control, validation, instrumentation, and computing.

Building Construction Technology

Associate in Science | Code: 26033 | 60 credits

The Building Construction Technology program is designed to furnish technically trained personnel for the building construction industry. The graduate may work with a contractor as part of the administrative team in such entry-level job positions as those leading to estimators, job coordinators, or project managers. Technical jobs may also be available in the following areas: land and project developers; technical sales for building materials, systems, and equipment; with local, state, and federal government agencies; as well as various financial institutions.

Business Administration

Associate in Science | Code: 25051 | 60 credits

This program transfers to four-year institutions. See department for information. The Business Administration program trains individuals to assume management or supervisory positions in business, industry, and government. It provides basic skills in a broad range of business functions including accounting, computer usage, management and marketing. Successful completion of this program earns the student entry into any university in the State University System as part of the A.S. to B.S. program

Business Intelligence Specialist

Associate in Science | Code: 25073 | 60 credits

The Associate in Science in Business Intelligence Specialist prepares students for employment as business intelligence analysts and related occupations and/or for upper division studies in data analytics. Business intelligence is a broad category of application programs and

technologies for gathering, storing, analyzing, and providing access to data to help enterprise users make improved business decisions. Students will learn how to build business intelligence applications and how to manipulate massive amounts of data, turning it into useful information and reports.

Civil Engineering Technology

Associate in Science | Code: 26035 | 63 credits

The Civil Engineering Technology program is designed for those students who wish immediate job placement prior to or after graduation. This program also satisfies many of the civil engineering freshman and sophomore requirements for the Bachelor of Engineering Technology degree offered by certain universities. Consult your Civil Engineering advisor prior to registration.

Clinical Laboratory Sciences

Associate in Science - Health Sciences | Code: 23023 | 76 credits

The Clinical Laboratory Sciences program prepares the graduate to work as part of the health care delivery team in a nonprofit clinical laboratory or research laboratory. Clinical practice is conducted in local health care facilities under the supervision of qualified registered professional personnel. Graduates are eligible for Florida State Licensure and Registry with the American Society of Clinical Pathologists and equivalent licensure.

Clinical Laboratory Sciences (Accelerated)

Associate in Science - Health Sciences | Code: 23023 | 76 credits

The Clinical Laboratory Sciences program prepares the graduate to work as part of the health care delivery team in a nonprofit clinical laboratory or research laboratory. Clinical practice is conducted in local health care facilities under the supervision of qualified registered professional personnel. Graduates are eligible for Florida State Licensure and Registry with the American Society of Clinical Pathologists and equivalent licensure.

Clinical Laboratory Sciences (Part-Time)

Associate in Science - Health Sciences | Code: 23023 | 76 credits

The Clinical Laboratory Sciences program prepares the graduate to work as part of the health care delivery team in a nonprofit clinical laboratory or research laboratory. Clinical practice is conducted in local health care facilities under the supervision of qualified registered professional personnel. Graduates are eligible for Florida State Licensure and Registry with the American Society of Clinical Pathologists and equivalent licensure.

Computer Crime Investigation

Associate in Science | Code: 27028 | 60 credits

The Associate in Science (AS) in Computer Crime Investigation will prepare graduates with the education and skills needed to fulfill roles and positions in the Information Security industry. The coursework will include education and applied technical skills in the criminal justice and information security fields.

Computer Engineering Technology

Associate in Science | Code: 26052 | 68 credits

The Computer Engineering Technology program prepares students for employment as computer engineering technicians/technologists and in related occupations in electronics. It also provides supplemental training for persons currently or previously employed in these occupations. The program focuses on the understanding and applying of hardware and software concepts, in addition to troubleshooting techniques to digital, microprocessor or computer-based systems. Assembly, installation, operation, maintenance, calibration, troubleshooting, repairing and elementary designs of medical systems are taught using an integrated and theoretical approach.

Computer Information Technology

Associate in Science | Code: 25055 | 60 credits

The Computer Information Technology program is to provide an opportunity to establish a basic foundation in computer applications. Graduates are prepared for positions as microcomputer support specialists, user support specialists, applications system specialists and computer information managers to meet the demands of today's automated offices. In addition, program objectives are designed to assist students in their development of interpersonal and communication skills required by office professionals.

Computer Programming and Analysis - Business Applications Programming

Associate in Science | Code: 25065 | 60 credits

The Computer Programming and Analysis program provides an opportunity to establish a basic foundation in computer programming in scientific, commercial, industrial and government data processing applications. Graduates are prepared for positions as entry-level application programmers, programmer specialists, computer programmers and programmer analysts.

Computer Programming and Analysis - Internet of Things (IoT) Applications

Associate in Science | Code: 25076 | 60 credits

Graduates of the program acquire a skill-set that leads to producing connected devices by developing applications that can run on microcontroller development boards, designing and simulating the functioning of the devices and building physical prototypes. Upon completion of the program, students will have learned how to develop applications in the dominant programming languages used in IoT, completed projects that they can include in their portfolio and configured different single board computers.

Computer Programming and Analysis - Mobile Applications Development

Associate in Science | Code: 25070 | 60 credits

The Computer Programming and Analysis program provides an opportunity to establish a basic foundation in computer programming in scientific, commercial, industrial and government data

processing applications. The Mobile Applications Development concentration offers hands on instruction with current technology for Apple and Android mobile device platforms. Graduates are prepared for positions as entry-level app developers.

Crime Scene Technology - Crime Scene Investigation

Associate in Science | Code: 27026 | 60 credits

The Associate in Science Degree in Crime Scene Technology will prepare students for employment in the field of criminalistics with a specialty in Crime Scene Investigation or Forensic Science. The student can serve as, but is not limited to, positions of Forensic Science Technician (SOC 194092), Crime Scene Technician, Medical Examiner Investigator, Medical Investigator, Insurance Investigator, Legal Investigator, Forensic Paralegal, Crime Scene Investigator, and Laboratory Technician. Students may also continue their formal education with the College and receive a BAS in Public Safety Management.

Crime Scene Technology - Forensic Science

Associate in Science | Code: 27027 | 60 credits

The Associate in Science Degree in Crime Scene Technology will prepare students for employment in the field of criminalistics with a specialty in Crime Scene Investigation or Forensic Science. The student can serve as, but is not limited to, positions of Forensic Science Technician, Crime Scene Technician, Medical Examiner Investigator, Medical Investigator, Insurance Investigator, Legal Investigator, Forensic Paralegal, Crime Scene Investigator, and Laboratory Technician. Students may also continue their formal education with the College and receive a BAS in Public Safety Management.

Criminal Justice Technology

Associate in Science | Code: 27012 | 60 credits

Upon completion of the Criminal Justice Technology program, the student will be eligible for the Associate in Science degree. The A.S. degree opens up entry-level non-sworn positions in local, state and federal agencies, i.e., juvenile justice, private security, law enforcement, corrections, probation and parole, detention centers and community based intervention programs.

Culinary Arts Management

Associate in Science | Code: 22031 | 64 credits

The Associate in Science degree will groom individuals for careers in the widely varied areas of the culinary industry, including production line and supervisory positions. This competency based culinary program will provide the student with a unique combination of comprehensive theoretical knowledge and hands on training. Students will master the fundamentals of culinary production in an environment that builds teamwork while gaining practical individualized experiences. The course content includes food preparation and service; identification, storage, selection and presentation of foods; training in communication, leadership, human relations,

and employability skills; and sanitation and safe work practices. Earning a degree will enable students to pursue further education at the university level or begin working in the field immediately upon graduation.

Cybersecurity

Associate in Science | Code: 25079 | 60 credits

The Cybersecurity program prepares students to fill a critical and growing need for cybersecurity personnel through hands-on experience along with simulation training and group/team-based learning to simulate a professional work environment. The program covers a wide range of topics including cybersecurity fundamentals, computer forensics and network security. Upon completion of the program, the student will have learned to evaluate security trends, recognize best practices, and understand IT security products and threats. Additionally, the curriculum is designed to aid students in preparing for many of the certification exams in the field.

Database Technology - Oracle Database Administration

Associate in Science | Code: 25058 | 60 credits

The Database Technology program is designed to provide an opportunity to establish a basic foundation in the field of database administration for employment in commercial, industrial and government institutions. Graduates are prepared for positions as database administrators and database developers.

Dental Hygiene

Associate in Science - Health Sciences | Code: 23022 | 88 credits

The Dental Hygienist is a licensed member of the dental health team dedicated to helping patients maintain good oral health and prevent dental disease and disorders. The dental hygienist performs dental cleaning, teaches patients proper oral care, takes x-rays and provides nutritional counseling for optimal oral health.

Diagnostic Medical Sonography Specialist

Associate in Science - Health Sciences | Code: 23039 | 72 credits

The Diagnostic Medical Sonography Specialist program prepares the student to become a Diagnostic Medical Sonographer. The Diagnostic Medical Sonographer provides patient services, using diagnostic ultrasound under the supervision of a doctor of medicine or osteopathy who is responsible for the use and interpretation of ultrasound procedures. The sonographer assists the physician in gathering sonographic data necessary to reach diagnostic decisions.

Drafting & Design Technology

Associate in Science | Code: 26037 | 62 credits

Drafting and Design Technology is a highly technical program which will adequately equip the student with the ability and skills necessary for acquisitions and advancement in the engineering technical aid and professional drafting fields. Specialized areas within the program include such specifics as structural steel draft-

ing, welding, piping, technical illustration and computer-aided drafting and design.

Early Childhood Education

Associate in Science | Code: 27014 | 60 credits

The Early Childhood Education Associate in Science degree program provides the student with appropriate coursework to become a childcare practitioner. Students may complete the Florida Child Care Professional Certificate (FCCPC) and/or the National Child Development Associate credential. This degree program is accredited by the National Association for the Education of Young Children (NAEYC).

Early Childhood Education - Administrators

Associate in Science | Code: 27033 | 60 credits

The Early Childhood Education Associate in Science degree program provides the student with appropriate coursework in Administration to become a center director. Students may complete the initial or advanced level of Administrator credentialing. This degree program is accredited by the National Association for the Education of Young Children (NAEYC).

Early Childhood Education - Infant Toddler

Associate in Science | Code: 27032 | 60 credits

The Early Childhood Education Associate in Science degree program provides the student with appropriate coursework in Infant-Toddler studies. Students may complete the Florida Child Care Professional Certificate (FCCPC) and/or the National Child Development Associate credential. This degree program is accredited by the National Association for the Education of Young Children (NAEYC).

Early Childhood Education - Preschool

Associate in Science | Code: 27031 | 60 credits

The Early Childhood Education Associate in Science degree program provides the student with appropriate coursework in Preschool studies. Students may complete the Florida Child Care Professional Certificate (FCCPC) and/or the National Child Development Associate credential. This degree program is accredited by the National Association for the Education of Young Children (NAEYC).

Electronics Engineering Technology

Associate in Science | Code: 26039 | 68 credits

The Electronics Engineering Technology program prepares students for work as technicians in various fields of electronics technology. Courses offered cover basic and advanced electrical circuits, semiconductors, integrated circuits, pulse circuits, digital computer circuits, electrical machinery, communication systems and industrial control. Theory and laboratory experience is provided. This program transfers to four-year institutions. See department advisor for information.

Emergency Medical Services

Associate in Science - Health Sciences | Code: 23048 | 73 credits

The Emergency Medical Services program is designed according to national and state standards. Graduates will perform as advanced practitioners and as leaders in the technical supervisory and managerial aspects of advanced emergency care. Graduates will be prepared primarily for employment in agencies of advanced emergency care. Graduates will be prepared primarily for employment in agencies providing pre-hospital emergency medical care and secondarily, for jobs in emergency and other acute care areas of the hospital.

Entrepreneurship

Associate in Science | Code: 20002 | 60 credits

The Associate in Science (AS) in Entrepreneurship prepares students to start-up and operate a business or social venture with a foundation in opportunity recognition, analysis, business model development and business plan creation. Graduates will bring a critically-informed perspective to their own start-up venture, family-owned business, or social venture.

Fashion Design

Associate in Science | Code: 22005 | 60 credits

The Associate in Science degree in Fashion Design offers students a comprehensive education in innovative design, pattern cutting and garment construction technology to prepare students to work as creative professionals in the world of fashion. From concept through production, students learn the design process and acquire the knowledge and skills to integrate creativity, technology, and retail into their work. This course of study will prepare students to develop a successful career and meet a growing local demand for creative design and skilled labor in the fashion industry.

Fashion Merchandising

Associate in Science | Code: 22020 | 60 credits

The Associate in Science degree in Fashion Merchandising offers students a comprehensive education, immersing students in the business of fashion where they can explore the interconnected relationships between marketing and design. The program offers students practical instruction in design, technology, and retail and merchandising practices. This course of study will prepare students to develop a successful career and meet a growing local demand for creative design and skilled labor in the fashion industry.

Film Production Technology

Associate in Science | Code: 26044 | 64 credits

Lights... Camera... Action! South Florida has become a hotbed for independent filmmakers and music video producers. Learn what it takes to become a successful film producer, director, writer, editor, cinematographer, production manager and crewmember while earning an Associate in Science (A.S.) degree in Film Production Technology. Learn to write scripts, shoot film and digital media, and edit projects on non-linear editing systems. Students have opportunities to exhibit their work in film showcases and participate in

hands-on workshops and seminars held in collaboration with the Miami International Film Festival.

Financial Services - Banking

Associate in Science | Code: 22026 | 60 credits

The Financial Services program is designed to meet the needs of students who plan to seek employment with commercial banks, stock brokerage companies and related financial organizations. It is also planned for students who are currently employed and desire advancement to positions of greater responsibility with financial organizations. This program meets most of the requirements for the American Institute of Banking diploma/certificates. The Associate in Arts degree is also available to the student planning to transfer to a senior institution after graduation from MDC. Consult an advisor about which additional courses are included in that program.

Financial Services - Wealth Management

Associate in Science | Code: 22024 | 60 credits

The Financial Services program is designed to meet the needs of students who plan to seek employment with commercial banks, stock brokerage companies and related financial organizations. It is also planned for students who are currently employed and desire advancement to positions of greater responsibility with financial organizations. This program meets most of the requirements for the American Institute of Banking diploma/certificates. The Associate in Arts degree is also available to the student planning to transfer to a senior institution after graduation from MDC. Consult an advisor about which additional courses are included in that program.

Financial Services - Mortgage Finance

Associate in Science | Code: 22025 | 60 credits

The Financial Services program is designed to meet the needs of students who plan to seek employment with commercial banks, stock brokerage companies and related financial organizations. It is also planned for students who are currently employed and desire advancement to positions of greater responsibility with financial organizations. This program meets most of the requirements for the American Institute of Banking diploma/certificates. The Associate in Arts degree is also available to the student planning to transfer to a senior institution after graduation from MDC. Consult an advisor about which additional courses are included in that program. Note: International Students are not admissible to this program.

Fire Science Technology

Associate in Science | Code: 27018 | 60 credits

The Fire Science Technology program prepares students for a wide variety of technical positions in the area of fire prevention and control. Students will learn about safety factors, building code requirements, national and local standards, hazardous materials, supervision and management skills, hydraulics, fire apparatus, tactics and strategy. The program has been designed to meet both the Florida Fire Fighters Pre-Officer Requirements and the NFPA 1021 Fire Officer Level Two Requirements.

Funeral Services

Associate in Science | Code: 23073 | 72 credits

Students in the Funeral Services program are given a broad understanding of all phases of funeral home operations as well as the public health responsibilities of the funeral director and embalmer. The Funeral Services Education degree program at Miami Dade College is accredited by the American Board of Funeral Service Education (ABFSE), 992 Mantua Pike, Suite 108, Woodbury Heights, NJ 08097, 816-233-3747, abfse.org. Students of the Associate in Science degree must register to take the International Conference of Funeral Service Examining Boards, Inc. National Board Examination during their final semester. Students who plan Funeral Service licensure in other states must contact the respective state board to determine that state's specific licensing requirements and the student is responsible for complying with all particular laws and requirements of that state. National Board Examination pass rates, graduation rates, and employment rates for this and other ABFSE-accredited programs are available at www.abfse.org. To request a printed copy of this program's pass rates and rates, go to the Funeral Service Education Office (Building 3142), by e-mail at funeralservices@mdc.edu, or by telephone 305-237-1244..

Game Development & Design

Associate in Science | Code: 25075 | 60 credits

The Game Development and Design program allows students to explore the entertainment technology landscape while still pursuing a broad-based education. With an emphasis on game programming, the program exposes students to the development and design processes. Students can further specialize in game design, production, engines and systems, graphics programming and animation, mobile, and more.

Graphic Design Technology

Associate in Science | Code: 26031 | 64 credits

The Graphic Design Technology A.S. degree program prepares students for employment as graphic designers, illustrators, photo editors, page layout artists, advertising designers, package designers, branding and visual identity designers. Coursework includes the production workflow process from the design concept to the finished printed or multimedia product.

Graphic Internet Technology

Associate in Science | Code: 26050 | 60 credits

The Graphic Internet Technology program is designed to prepare creative students for a rewarding and challenging career as web designers. Students learn the design and creation of websites, incorporating graphic interfaces, aesthetic content, streaming media and dynamic databases. Upon completion, students will have the skills needed to succeed in the fast-growing field of web design.

Health Information Technology

Associate in Science - Health Sciences | Code: 23053 | 70 credits

The Health Information Management program prepares the individual for employment as a Health Information Technician in a vari-

ety of health care facilities. The technician may function in various capacities, having responsibilities such as coding of diagnoses and procedures; processing of health information; storage and retrieval of health information and statistical reporting. Other aspects of the curriculum include medical legal aspects, quality assessment and supervision of the daily operations of a Health Information Department. Management of computerized health information is emphasized. Clinical experiences are provided under the supervision of qualified professionals to enhance classroom instruction and demonstrate current advances in health information practice. A grade of "C" or better is required in all program courses.

Health Information Technology (Accelerated)

Associate in Science - Health Sciences | Code: 23053 | 70 credits

The Health Information Management program prepares the individual for employment as a Health Information Technician in a variety of health care facilities. The technician may function in various capacities, having responsibilities such as coding of diagnoses and procedures; processing of health information; storage and retrieval of health information and statistical reporting. Other aspects of the curriculum include medical legal aspects, quality assessment and supervision of the daily operations of a Health Information Department. Management of computerized health information is emphasized. Clinical experiences are provided under the supervision of qualified professionals to enhance classroom instruction and demonstrate current advances in health information practice. A grade of "C" or better is required in all program courses.

Health Sciences

Associate in Science - Health Sciences | Code: 23080 | 60 credits

The Health Sciences program provides students an introduction to the healthcare field and an in-depth science background to prepare them for a health-related career or a graduate professional health program or other graduate program.

Histologic Technology

Associate in Science - Health Sciences | Code: 23063 | 76 credits

The Histologic Technology program prepares the student for employment in a wide choice of practice settings including hospitals, clinics, clinical laboratories, veterinary pathology and forensic pathology. A Histotechnologist will be able to freeze, embed, and cut tissues, mount tissue samples on slides and stain them with dyes to make the cell details visible under the microscope. Graduates are eligible to sit for the Florida State Licensure and Registry with the American Society of Clinical Pathologists.

Hospitality & Tourism Management

Associate in Science | Code: 22016 | 60 credits

The Hospitality and Tourism Management program provides professional preparation for a career in the hospitality industry. Hospitality management is presented as a core curriculum with emphasis on hotel, cruise-line, resorts, conventions, and institutional management. An internship program is required to provide practical experience in

the field of the student's choice. The Associate in Arts degree is also available to the student planning to transfer to a four-year institution after graduation from MDC. Consult an advisor about which additional courses are included in that program.

Industrial Engineering Technology

Associate in Science | Code: 22030 | 64 credits

The AS in Industrial Engineering Technology will provide students with the opportunity to acquire the knowledge and skill sets necessary for careers in manufacturing with an emphasis in industrial device and pharmaceutical manufacturing. The program prepares students for employment as a Manufacturing Engineering Technician or Production Technician in manufacturing settings. Note: International Students are not admissible to this program.

Industrial Management Technology

Associate in Science | Code: 25020 | 60 credits

The Industrial Management Technology program is primarily designed to provide additional competencies for administrative, managerial, supervisory, and technical discipline areas for personnel that have mastered technical proficiencies from prior training programs or work experiences. In addition, general education courses will be required to ensure good communication and computational skills. Most of the course work required will enhance the prior technical skills mastered and prepare the graduate for supervisory and/or advanced technical positions. Note: International Students are not admissible to this program.

Instructional Services Technology

Associate in Science | Code: 22013 | 63 credits

The Instructional Services Technology program provides training for students who desire to enter the field of education as paraprofessionals. Competencies covered in this program prepare paraprofessionals to support and extend instruction and services effectively, further increasing student learning. These competencies include the areas of instructional strategies in math, science, technology, behavior management, and human growth and development, as well as principles of language acquisition and literacy development. Students who complete the A.S. Degree in Instructional Services Technology may also obtain an AA degree through appropriate course selection (please consult with your advisor).

Interior Design Technology

Associate in Science | Code: 26030 | 75 credits

The Interior Design Technology program is planned to develop ability in the design of interiors, to encourage originality and to foster talent in this field. It includes theoretical and technical aspects of interior design. The program is open to those who study for pleasure and those preparing for a career.

Landscape & Horticulture Technology

Associate in Science | Code: 21005 | 60 credits

The purpose of this program is to prepare students for employment in horticulture and landscape industries. The students will learn about plant growth, nutrition and fertilization, plant classification and identification, propagation, pest control, pruning, maintenance and drainage. Students will also gain business management and job skills. Students pursuing the Horticulture Specialization will obtain the skills necessary for protecting, processing, shipping and marketing of commercially viable plants. Students pursuing the Landscape Specialization will obtain the skills necessary for landscape design and installation.

Marketing

Associate in Science | Code: 25047 | 60 credits

The Associate in Science (AS) in Marketing is designed mainly for students who intend to seek immediate employment in the fields of marketing, international business and trade, or real estate; also for those desiring to work in a non-profit institution and those presently employed in marketing but seeking advancement. The Associate in Arts degree is also available to the student planning to transfer to a senior institution after graduating from Miami Dade College. Consult an advisor about additional courses for such plans.

Music Business - Business Management

Associate in Science | Code: 25019 | 64 credits

The Music Business Management program, one of three Music Business degree program options, is designed for students pursuing careers in the music or entertainment industries, with a focus on business skills and business knowledge specific to the music industry. The program combines a traditional music curriculum with industry-related courses and experiences. The Music Business curriculum includes copyright, publishing, artist development, the recording industry, sales, retailing, live concert promotion and management, preparing well-rounded graduates knowledgeable in all aspects of the music industry.

Music Business - Creative Performance

Associate in Science | Code: 25043 | 64 credits

The Music Business Creative Performance program, one of three Music Business degree program options, provides a structured program for students who have a strong interest in performing, composing or arranging music, and want to develop a diverse set of skills and knowledge related to the music business/entertainment industries. Students choosing this option study business, music business, music theory and music performance. This is the perfect program for students who want to manage their own careers as performers.

Music Business - Creative Production

Associate in Science | Code: 25044 | 64 credits

The Music Business Creative Production program, one of three Music Business degree program options, is designed for students interested in music technology. Often referred to as sound recording, this pathway provides students with hands-on experiences with the machines

and software applications associated with audio production. MIDI, sound recording, music theory and other courses are completed within the context of Music Business studies. This course of study specifically includes miking techniques, recording console operations, patch bay functions, audio wiring, audio mixing concepts, and other related course work. This pathway helps students enhance their career possibilities by combining practical music business knowledge with technical experience.

Networking Services Technology

Associate in Science | Code: 25062 | 60 credits

The Networking Services Technology program provides an opportunity to establish a basic foundation in the field of network design and administration for employment in commercial, industrial and government institutions. Graduates are prepared for positions as information technology specialists, help desk specialists, network specialists, entry level security specialists and network systems analysts. There is only one A.S. program for Networking Services Technology. Students may select one of the three options (Networking with Cisco, Enterprise Cloud Computing or Network Security). The student will be awarded the Networking Services Technology degree only once.

Networking Services Technology - Enterprise Cloud Computing

Associate in Science | Code: 25077 | 60 credits

The Networking Services Technology - Enterprise Cloud Computing program is designed to provide an opportunity to establish foundation in architect scalable, highly available application solutions that leverage cloud computing services, utilizing best practices focusing on cloud security, cost, and reliability. Graduates will utilize core design patterns and infrastructure expertise to implement solutions to deploy and maintain workloads and applications.

Networking Services Technology - Network Security

Associate in Science | Code: 25078 | 60 credits

The Network Security program prepares students to secure computer networks and protect them against unauthorized intrusions while establishing a foundation in the field of network design and administration. The program has an emphasis on operations, hardening and administration of network security devices. Graduates of the AS Program in this concentration acquire a skill-set that allows the student to collect and analyze system logs, perform network penetration testing, and install and operate IDS/IPS, VPNs, firewalls and honeypots.

Nuclear Medicine Technology

Associate in Science - Health Sciences | Code: 23069 | 75 credits

The Nuclear Medicine Technology program is designed to prepare selected students to qualify as nuclear medicine technologists in hospitals, outpatient diagnostic imaging centers, and private physician offices. These contributing members of the allied health

team prepare and administer the tracer radio pharmaceuticals to the patients and record the image using computerized detection systems for medical diagnosis. Successful completion of this two-year program qualifies graduates to apply for the American Registry for Radiologic Technologists examination in Nuclear Medicine and/or the Nuclear Medicine Technology Certification Board Examination leading to certification as a registered nuclear medicine technologist and gainful employment as such.

Nursing - R.N. (Generic Full-Time)

Associate in Science - Nursing | Code: 23030 | 72 credits

The Generic Nursing Option is designed to prepare students without previous health care education for careers as Registered Nurses. The program is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Rd. N.E., Suite 850, Atlanta, GA., 30326, 404-975-5000, acenursing.org and approved by the Florida Board of Nursing (FBON). Graduates are eligible to apply to take the National Council Licensing Examination for Registered Nurses (NCLEX-RN). See the School of Nursing Information website for specific details about admission requirements. Pre-Admission tests - Applicants must take the ATI Test of Essential Academic Skills (TEAS).

Nursing - R.N. (Generic Part-Time)

Associate in Science - Nursing | Code: 23030 | 72 credits

The Generic Nursing Option is designed to prepare students without previous health care education for careers as Registered Nurses. The program is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Rd. N.E., Suite 850, Atlanta, GA., 30326, 404-975-5000, acenursing.org and approved by the Florida Board of Nursing (FBON). Graduates are eligible to apply to take the National Council Licensing Examination for Registered Nurses (NCLEX-RN). The part-time track is designed for individuals who must work while they attend school. Nursing Information Booklet for more specific details about admission requirements. See the School of Nursing Information website for specific details about admission requirements. Pre-Admission tests - Applicants must take the ATI Test of Essential Academic Skills (TEAS).

Nursing - R.N. (Transitional Full-Time)

Associate in Science - Nursing | Code: 23029 | 72 credits

The Transition Option in Nursing is designed for students pursuing the career of a professional nurse who hold a license or certificate in specific healthcare fields for practice as a Registered Nurse (RN). The content and clinical experiences are designed to meet the learning and professional socialization needs of this special category of student. The program is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Rd. N.E., Suite 850, Atlanta, GA., 30326, 404-975-5000, acenursing.org and approved by the Florida Board of Nursing (FBON). Graduates are eligible to apply to write the National Council Licensing Examination for Registered Nurses (NCLEX-RN). See the School of Nursing Information website for more specific details about admission

requirements. Pre-Admission tests - Applicants must take the ATI Test of Essential Academic Skills (TEAS).

Nursing - R.N. (Transitional Part-Time)

Associate in Science - Nursing | Code: 23029 | 72 credits

The Transition Option in Nursing is designed for students pursuing the career of a professional nurse who hold a license or certificate in specific healthcare fields for practice as a Registered Nurse (RN). This option is designed for students who prefer an extended program of study. The content and clinical experiences are designed to meet the learning and professional socialization needs of this special category of student. The program is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Rd. N.E., Suite 850, Atlanta, GA., 30326, 404-975-5000, acenursing.org and approved by the Florida Board of Nursing (FBON). Graduates are eligible to apply to write the National Council Licensing Examination for Registered Nurses (NCLEX-RN). See the School of Nursing Information website for more specific details about admission requirements. Pre-Admission tests - Applicants must take the ATI Test of Essential Academic Skills (TEAS).

Nursing-R.N. (Accelerated)

Associate in Science - Nursing | Code: 23032 | 72 credits

The Accelerated Option in Nursing is designed to prepare the student with a baccalaureate degree in another discipline for a career as a Registered Nurse (RN). The content and clinical experiences are designed to meet the learning and professional socialization needs of this special category of student. The program is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3343 Peachtree Rd. N.E., Suite 850, Atlanta, GA., 30326, 404-975-5000, acenursing.org and approved by the Florida Board of Nursing (FBON). Graduates are eligible to apply to write the National Council Licensing Examination for Registered Nurses (NCLEX-RN). Selection is based on scores on pre-admission testing and completion of required prerequisite courses. See the School of Nursing Information website for more specific details about admission requirements. Pre-Admission tests - Applicants must take the ATI Test of Essential Academic Skills (TEAS).

Opticianry

Associate in Science - Health Sciences | Code: 23040 | 72 credits

The Opticianry program simultaneously prepares students for three ophthalmic health care careers: optician, optometric technician and ophthalmic medical assistant. A concentrated presentation of general education courses combined with career development and clinical experience accomplishes this multi-disciplinary approach. Among the marketable skills acquired are clinical data collection, ophthalmic fabrication and ophthalmic dispensing. The student begins working with patients during the third semester in clinics staffed by ophthalmologists, optometrists and opticians. A student must maintain a grade point average of 2.0 or better in each course with an "OPT" prefix in order to advance within the program. The successful completion of this program offers the graduate a challenging and rewarding career on an ophthalmic

health care team. Graduates are eligible to sit for the Opticianry Licensure Examination and the Optometric Technician Registration Examination. After one year of work experience with an ophthalmologist, graduates may sit for the Ophthalmic Medical Assistant Certification Examination. The Opticianry program is approved by the Council on Optometric Education and the Commission on Opticianry Accreditation.

Paralegal Studies - ABA Approved

Associate in Science | Code: 27013 | 64 credits

The Legal Assisting program prepares students to obtain entry-level employment in law offices, government agencies, banks or business corporations. It also enables persons working in the field without a degree to upgrade their skills to become a qualified paralegal. The MDC Legal Assisting program is approved by the American Bar Association. The American Bar Association defines a paralegal or legal assistant as "a person, qualified by education, training or work experience who is employed or retained by a lawyer, law office, corporation, governmental agency or other entity and who performs specifically delegated substantive legal work for which a lawyer is responsible." Paralegals cannot give legal advice, set fees, negotiate or represent clients in court as these activities involve the actual practice of law. Paralegals work under the supervision of attorneys and are not just "document preparers," working directly with the public. Additional Information: It is necessary to see an advisor prior to beginning the program and before registering each term. For more information please contact the Legal Assistant Program at 305-237-7813 or visit mdc.edu/wolfson/academic/LegalAssistant/default.asp

Photographic Technology

Associate in Science | Code: 26032 | 64 credits

The Photographic Technology program is designed to meet individual students' needs for either further study or immediate employment in the field of commercial and industrial photography. Students develop a wide variety of photographic and art-related skills and the ability to use these skills to produce commercially viable photographs. Instruction covers portrait photography, still photography, fashion photography, illustrative photography as well as the business skills needed to manage a photographic enterprise. Various internships such as in biomedical and forensic technology are available to students.

Physical Therapist Assistant

Associate in Science - Health Sciences | Code: 23035 | 74 credits

The Physical Therapist Assistant program prepares students for employment in hospitals, rehabilitation centers, nursing homes, private practices or other qualified health agencies. Graduates will work under the direction and supervision of a physical therapist in the promotion of optimal human health and function through the application of scientific principles to prevent, identify, correct or alleviate acute or prolonged physical disability of anatomic or physiologic origin. Externship or clinical practice

is conducted in local health care facilities under the supervision of qualified professional personnel. The program is accredited by the Commission on Accreditation in Physical Therapy Education. Graduates of the program are eligible to take the National Board Examination and receive an Associate in Science degree in Physical Therapist Assisting.

Professional Pilot Technology

Associate in Science | Code: 26029 | 64 credits

The Professional Pilot Technology program is primarily developed to meet the challenging regional airline requirements for pilots; therefore, graduates of the program will earn the following Federal Aviation Administration (FAA) Certificates: Private, Commercial Pilot with Single and Multi-Engine Ratings. In addition, these certificates can be applied toward a Certified Flight Instructor (CFI) Certificate. Additional Information: Students interested in this program must first pass an FAA Class 3 medical evaluation prior to beginning classes. Cost of flight training is in addition to normal tuition costs. Contact the Aviation Department at 305-237-5950 for information and advisement.

Radio & Television Broadcast Programming

Associate in Science | Code: 26043 | 64 credits

Cue Camera !! Students are trained in a state-of-the-art, high-definition broadcast facility to perform all functions of a television production crew, including: director, camera operator, floor manager, production assistant, technical director, graphics operator, audio engineer, and teleprompter operator. Field production and broadcasting practices enhance the student's advantage towards gaining lucrative employment in the expanding South Florida radio and television industries, as well as allied fields such as in-house educational and industrial studios.

Radiography

Associate in Science - Health Sciences | Code: 23036 | 77 credits

The Radiography program is an Associate of Applied Science degree, which provides a broad base of education and performance-based clinical experience in all technical aspects of work as a Radiographer. Experience is provided in all routine general and fluoroscopic procedures, special procedures and in the use of the specialized equipment and techniques available in the affiliated clinical education centers. The graduate is eligible to apply to take the Registry Examination of the American Registry of Radiologic Technologists. The application deadline is Feb. 15 for the class beginning the following Summer term. Additional Information: All applicants must attend an Information Session before acceptance into the Radiography program. Applicants must pass a physical, meet physical requirements, must complete an approved CPR course and an approved HIV/AIDS course before beginning the Radiography program. Due to the limited number of students that can be accepted into the Radiography program, it is important that applicants be properly informed. For information, advisement, application forms and deadline dates, interested students should contact the Department of Radiologic Sciences, Medical Center Campus.

Respiratory Care

Associate in Science - Health Sciences | Code: 23045 | 76 credits

The Respiratory Care program prepares the successful graduates for employment in health agencies where they will work with the physician and other professionals in treating patients with respiratory ailments or injuries affecting the respiratory function. Emphasis will be placed on supervised clinical instruction and practice in local health care facilities. Completion of this two-year accredited program enables the graduate to apply for entry into the Examination Process of the N.B.R.C. A grade of "C" or better is required in each course.

Respiratory Care (Accelerated)

Associate in Science - Health Sciences | Code: 23045 | 76 credits

The Respiratory Care CRT to RRT Completion program prepares the practicing Certified Respiratory Therapist (CRT) to acquire the Registered Respiratory Therapist (RRT) credential, by completing the program requirements in order to meet eligibility for the National Board for Respiratory Care (NBRC) RRT examination. The emphasis of the accelerated CRT to RRT completion program is on teaching the didactic, laboratory, and clinical competencies required of a registered respiratory therapist (RRT). CRT to RRT students will be classified as Advanced Placement in the Respiratory Care Program..

Sign Language Interpretation

Associate in Science | Code: 23033 | 66 credits

The Sign Language Interpretation program (SLI) is designed to develop the skills necessary to interpret the communications between deaf or hard of hearing persons and hearing individuals in an accurate and effective manner. Students prepare to work as entry-level American Sign Language (ASL) interpreters or to transfer to a bachelor's degree program in ASL-English Interpreting.

Social and Human Services - Addictions Studies

Associate in Science | Code: 25067 | 60 credits

The Social and Human Services program with a specialization in Addiction Studies is designed to prepare students for employment as human services specialists, human services practitioners, chemical dependency practitioners, addiction specialists, mental health and social service practitioners, or to provide supplemental training for persons previously or currently employed in these occupations. The program is also designed to provide most of the general academic and addiction specific requirements of the Certification Board for Addiction Professionals of Florida.

Social and Human Services - Generalist

Associate in Science | Code: 25026 | 60 credits

The Generalist Human Services Associate in Science degree prepares the students for employment in the network of programs and agencies which provide a vast array of human needs. These include areas such as child care, criminal justice, education, health, housing, income maintenance, mental health and retardation, among others. These needs are provided for a variety of settings,

such as clinics, hospitals, nursing homes, rehabilitation centers and social agencies.

Translation/Interpretation Studies

Associate in Science | Code: 24050 | 60 credits

This program is designed to provide bilingual students with the knowledge and skills necessary to carry out the work associated with areas of translation (written) and interpretation (oral) in the workplace. Graduates are prepared for positions as court translators/ interpreters, in-house translators/interpreters for the private sector (including translation/interpretation agencies), translators for government agencies, hospital interpreters/translators, freelance translators/interpreters and telephone interpreters. Graduates will have the basic foundation to establish their own translation/interpretation business.

Transportation & Logistics

Associate in Science | Code: 28000 | 64 credits

This Transportation and Logistics A.S. degree program provides core courses in transportation policy, law, safety, security, management and marketing, and an integrated understanding of the intermodal relationship between the various modes of transportation. In addition, college credit certificates will be offered in Intermodal Freight Transportation and Surface Transportation.

Veterinary Technology

Associate in Science - Health Sciences | Code: 23062 | 73 credits

The Veterinary Technology program prepares students to assist veterinarians in their daily practice, working with all types of animals and in various disciplines within the realm of veterinary medicine. Tasks include providing total nursing care to the sick or injured patient, handling and restraint, assisting during examinations and surgical procedures, performing dental hygiene and radiographic exams and collection and analysis of diagnostic specimens. Graduates are eligible to apply to take the Veterinary Technician National Examination (VTNE) and the Florida Practical Exam (FPE).

ASSOCIATE IN APPLIED SCIENCE DEGREE (AAS)

The two year Associate in Applied Science Degree (AAS) is similar to the Associate of Science degree in that it prepares individuals for entry into a career upon graduation. The AAS

was established to prepare individuals for careers requiring specialized study at the college level. The AAS degree does not usually articulate or transfer to the upper divisions.

The AAS degree programs are comprised mostly of courses directly related to the identified career area, with the remaining courses comprised of general education classes such as English, oral communications, math/science, behavioral/social science and humanities.

STUDENTS SHOULD CHECK THEIR INDIVIDUALIZED DEGREE AUDIT REPORT TO DETERMINE THE SPECIFIC GRADUATION POLICIES IN EFFECT. REQUIREMENTS MAY CHANGE BASED ON THE YEAR AND TERM A STUDENT ENTERS MIAMI DADE COLLEGE. THE DEGREE AUDIT REPORT INCLUDES CURRENT GRADUATION REQUIREMENTS. THE FINAL RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS STATED IN THE DEGREE AUDIT REPORT RESTS WITH THE STUDENT.

Automotive Service Management Technology

Associate in Applied Science Degree (AAS) | Code: A1000 | 68 credits

The Automotive Service Management Technology program is offered for students who have completed or are concurrently enrolled in a nationally certified and approved 1,440 contract-hour automotive mechanics program.

ADVANCED TECHNICAL CERTIFICATES (ATC)

The Advanced Technical Certificate (ATC) is available to students who have been awarded an Associate in Science degree or higher and wish to upgrade their skills. Students must successfully complete a prescribed set of courses at the advanced level in order to be awarded the ATC.

STUDENTS SHOULD CHECK THEIR INDIVIDUALIZED DEGREE AUDIT REPORT TO DETERMINE THE SPECIFIC GRADUATION POLICIES IN EFFECT. REQUIREMENTS MAY CHANGE BASED ON THE YEAR AND TERM A STUDENT ENTERS MIAMI DADE COLLEGE. THE DEGREE AUDIT REPORT INCLUDES CURRENT GRADUATION REQUIREMENTS. THE FINAL RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS STATED IN THE DEGREE AUDIT REPORT RESTS WITH THE STUDENT.

Biotechnology

Advanced Technical Certificate | Code: C6028 | 33 credits

A fast-track certification program in Biotechnology is available for students with bachelor's degrees, or having at least an associate degree and a strong background in college-level math and science courses. This background, combined with selected courses in the biotechnology program, will provide students with the necessary skills to seek employment in Biotechnology and related industries.

Biotechnology - Bioinformatics

Advanced Technical Certificate | Code: C6029 | 33 credits

A fast-track certification program in Biotechnology is available for students with bachelor's degrees, or having at least an associate degree and a strong background in college-level math and science courses. This background, combined with selected courses in the biotechnology program, will provide students with the necessary skills to seek employment in Biotechnology and related industries.

Biotechnology - Chemical Technology

Advanced Technical Certificate | Code: C6030 | 33 credits

A fast-track certification program in Biotechnology is available for students with bachelor's degrees, or having at least an associate degree and a strong background in college-level math and science courses. This background, combined with selected courses in the biotechnology program, will provide students with the necessary skills to seek employment in Biotechnology and related industries.

Certified Flight Instructor

Advanced Technical Certificate | Code: C6027 | 13 credits

The Certified Flight Instructor (CFI) Advanced Technical Certificate program includes theory, flight and lab instruction. The program meets FAA requirements for a CFI. In addition to the FAA requirements, each student will learn to develop lesson plans and learn how to communicate effectively using a variety of instructional materials and feedback techniques. Students wishing to enroll in this program must possess a Commercial Pilot's License. Upon successful completion of this program, students will be able to demonstrate knowledge of private and commercial pilot certification; fundamentals of instruction in a single engine airplane; ability to recognize, analyze and provide correction of common student errors; and knowledge of the responsibilities of Certified Flight Instructors (CFI). Contact the Aviation Department at 305-237-5900 for information and advisement.

Compensation & Benefits

Advanced Technical Certificate | Code: C6002 | 18 credits

The Advanced Technical Certificate in Compensation and Benefits prepares students to design and manage compensation and benefits systems to attract, motivate and retain various employee groups. The compensation and benefits managers plan, direct, and coordinate the reward functions of an organization.

Hospitality Management

Advanced Technical Certificate | Code: C6000 | 18 credits

The Advanced Technical Certificate (ATC) in Hospitality Management will assist new and experienced hospitality industry personnel upgrade their management skills to increase employment opportunities. This certificate focuses on enhancing the skills needed for restaurant management, bar and beverage management, hotel and lodging management, food service management, business supervision and management, accounting and revenue management, and hospitality industry policies and regulations.

Human Resource Management

Advanced Technical Certificate | Code: C6001 | 24 credits

The Advanced Technical Certificate (ATC) in Human Resources Management will assist new and experienced human resource professionals upgrade their knowledge and skills in order increase their employment opportunities. The student will be able to plan, direct, and coordinate the recruiting, interviewing, hiring and retaining employees.

Medical Interpretation - Language Neutral

Advanced Technical Certificate | Code: C6035 | 15 credits

The Medical Interpreting – Language Neutral Advanced Technical Certificate (ATC) will provide professional training in medical interpreting for speakers of widely-spoken languages other than Spanish. Students will meet the criteria to sit for the National Certified Medical Interpreters Exam (CMI). This certificate is offered at the Homestead Campus only.

COLLEGE CREDIT CERTIFICATES (CCC)

College Credit Certificate (CCC) programs are subsets of selected Associate in Science/Associate of Applied Science degrees. The CCC meets the Florida Department of Education Certified College Credit program requirements and the student receives an institutional College Credit Certificate upon completion of the program, and the college credits granted in these programs will apply toward the related Associate in Science degree. Students may earn more than one CCC, provided the certificates do not share the same classification of instructional program (CIP) code.

Health Science certificates are offered at the Medical Campus. Students interested in any of the Health Science certificates are encouraged to consult advisors in the New Student Center to receive the most current information

regarding program admission.

STUDENTS SHOULD CHECK THEIR INDIVIDUALIZED DEGREE AUDIT REPORT TO DETERMINE THE SPECIFIC GRADUATION POLICIES IN EFFECT. REQUIREMENTS MAY CHANGE BASED ON THE YEAR AND TERM A STUDENT ENTERS MIAMI DADE COLLEGE. THE DEGREE AUDIT REPORT INCLUDES CURRENT GRADUATION REQUIREMENTS. THE FINAL RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS STATED IN THE DEGREE AUDIT REPORT RESTS WITH THE STUDENT.

Accounting Clerk

College Credit Certificate | Code: 65075 | 18 credits

The College Credit Certificate in Accounting Clerk will prepare students to compute, classify, and record numerical data to keep financial records complete. Students will also be prepared to check the accuracy of figures, calculations, and postings pertaining to business transactions recorded by other workers.

Accounting Technology Management

College Credit Certificate | Code: 65077 | 27 credits

The Accounting Applications College Credit Certificate program is designed to prepare students for employment as accounting clerks, data processing clerks, junior accountants and assistant accountants, or to provide supplemental training for persons previously or currently employed in these occupations. The program prepares individuals in the principles, procedures and theories of organizing and maintaining business and financial records, and the preparation of accompanying financial reports.

Addiction Studies

College Credit Certificate | Code: 65078 | 24 credits

The Human Services program with a specialization in Addiction Studies is designed to prepare students for employment as human services specialists, human services practitioners, chemical dependency practitioners, addiction specialists, mental health and social service practitioners, or to provide supplemental training for persons previously or currently employed in these occupations. The program is also designed to provide most of the general academic and addiction specific requirements of the Certification Board for Addiction Professionals of Florida.

Airline/Aviation Management

College Credit Certificate | Code: 63012 | 16 credits

The Airline/Aviation Management College Credit Certificate program will provide the student with aviation management skills in an accelerated time frame. These include areas such as airline/aviation industry knowledge, management skills, marketing, law and operations. Students will learn how to take industry concepts and apply them both individually and as a team. They will be able to gain insight into the actual issues involved in running

an airline at both the micro and macro levels, from a leadership perspective. They will also acquire up-to-date knowledge about airline/aviation technologies and law, and the latest management concepts and practical application of theories to real life aviation scenarios. Contact the Aviation Department at 305-237-5950 for information and advisement.

Airline Maintenance Procedures and Records Management

College Credit Certificate | Code: 63018 | 18 credits

The College Credit Certificate (CCC) in Airline Maintenance Procedures and Records Management will fill a growing need to train personnel in how to organize, review and classify aircraft records to comply with FAA regulations, as well as successfully manage records at aircraft manufacturers, airlines and maintenance repair operators. Students will receive a wide-range of classroom and hands-on training that will provide the student with the education and knowledge to successfully manage the aircraft records department in an aviation company.

Air Cargo Management

College Credit Certificate | Code: 66030 | 16 credits

The Air Cargo Management College Credit Certificate program is designed to give students the skills required to gain employment as an air cargo agent. The program can be completed in one or two semesters with classes offered during the day or evening hours. All of the credits earned can be applied towards an A.S. degree in Aviation Administration. Contact the Aviation Department at 305-237-5950 for information and advisement.

Airport Management

College Credit Certificate | Code: 63017 | 16 credits

The Airport Management College credit certificate program provides the student with the skills required to advance to management positions at airport (city & government) and/or airline terminal operations. Students will understand the cost centers, design processes and financial considerations required to be an effective manager in the aviation industry. Contact the Aviation Department at 305-237-5950 for information and advisement.

Audio Technology

College Credit Certificate | Code: 61000 | 15 credits

The Audio Technology College Credit Certificate (CCC) is designed for students who intend to seek employment within the music business industry as an alternative to the strictly traditional Music degree program. The Audio Technology college credit certificate combines a traditional music curriculum with industry-related courses and experiences. The curriculum stresses hands-on equipment use in sound engineering and recording, midi music creation, sound reinforcement methods and technologies, and computer applications.

Automation

College Credit Certificate | Code: 68000 | 15 credits

This certificate prepares students for initial employment with an occupational title as an Automation or Applied Automation Specialist in various specialized areas. It can also provide added training for persons in these occupations. These courses can be applied toward the Associate of Science in Advanced Manufacturing.

Banking Management

College Credit Certificate | Code: 65045 | 27 credits

The Banking Specialist College Credit Certificate program provides students with both general knowledge and specific competencies that establish a foundation for a successful financial services career. Because the required courses provide an ideal foundation upon which to build banking-specific knowledge and skills, the certificate is well-suited for individuals planning to make banking their long-term career. In that regard, candidates for the certificate include career entry employees with clerical, administrative or customer service responsibilities who are establishing career pathways through professional development and related job experience, professionals who recently entered banking from other industries and management trainees who desire a broader understanding of the financial services industry. Generally, positions would include banking managerial support workers. Positions that could be available based upon this training include Customer Service Representative and Financial/Banking Specialist. This program also meets the requirements for the Center for Financial Training national industry diploma.

Banking Operations

College Credit Certificate | Code: 65044 | 18 credits

The Banking Operations College Credit Certificate program is designed to provide students with the knowledge to analyze companies and their ability to repay loans. The intended audience includes lending support personnel, junior credit analysts and others who seek a pathway to lending. Generally, positions could also include first line banking supervisors. Positions that could be available based upon this training include Credit Analysis and Financial Analyst. This program also meets the requirements for the Center for Financial Training national industry diploma.

Banking Specialist

College Credit Certificate | Code: 65043 | 12 credits

The Banking Specialist College Credit Certificate program provides students with both general knowledge and specific competencies that establish a foundation for a successful financial services career. Because the required courses provide an ideal foundation upon which to build banking-specific knowledge and skills, the certificate is well-suited for individuals planning to make banking their long-term career. In that regard, candidates for the certificate include career entry employees with clerical, administrative or customer service responsibilities who are establishing career pathways through professional development and related job experience, professionals who recently entered banking from other industries and manage-

ment trainees who desire a broader understanding of the financial services industry. Generally, positions would include banking managerial support workers. Positions that could be available based upon this training include Customer Service Representative and Financial/Banking Specialist. This program also meets the requirements for the Center for Financial Training national industry diploma.

Biotechnology

College Credit Certificate | Code: 60002 | 19 credits

The College Credit Certificate in Biotechnology seeks to prepare students for immediate entry-level employment in the biotechnology, pharmaceutical, or medical-device manufacturing industry. The program prepares individuals in the principles, procedures, and practices used in the bioscience industries. The college credits granted in this program will apply toward an Associate in Science degree in Biotechnology.

Building Construction Specialist

College Credit Certificate | Code: 66025 | 18 credits

The Building Construction Specialist college credit certificate prepares students for entry in the construction field through acquisition of a basic understanding of drawings and construction estimating through curriculum and practical experiences. Following successful completion, students can obtain employment assisting in construction offices or job sites.

Business Entrepreneurship Specialist – Family-Owned Business

College Credit Certificate | Code: 65098 | 12 credits

The Business Entrepreneurship Specialist College Credit Certificate is designed to prepare students for employment in entry-level positions or opening their own business or venture in the following areas: Family-Owned Business, Start-Up Venture, and Social Venture. Students may select one of the 3 options, but the certificate is awarded only once.

Business Entrepreneurship Specialist – Social Venture

College Credit Certificate | Code: 65097 | 12 credits

The Business Entrepreneurship Specialist College Credit Certificate is designed to prepare students for employment in entry-level positions or opening their own business or venture in the following areas: Family-Owned Business, Start-Up Venture, and Social Venture. Students may select one of the 3 options, but the certificate is awarded only once.

Business Entrepreneurship Specialist – Start-Up Venture

College Credit Certificate | Code: 65101 | 12 credits

The Business Entrepreneurship Specialist College Credit Certificate is designed to prepare students for employment in entry-level positions or opening their own business or venture in the following areas: Family-Owned Business, Start-Up Venture, and Social Venture.

Students may select one of the 3 options, but the certificate is awarded only once.

Business Intelligence Professional

College Credit Certificate | Code: 66038 | 20 credits

The Business Intelligence Professional College Credit Certificate prepares students for employment manipulating and analyzing massive amounts of data and turning it into useful information and reports. Students are prepared for employment, or continued studies in lower and upper division programs.

Business Management - Management

College Credit Certificate | Code: 65041 | 24 credits

The Business Management College Credit Certificate program is the third in a series of three College Credit Certificate programs designed to prepare students for the positions of manager trainee, supervisor or small business owner. It also provides supplemental training for persons previously or currently engaged in these activities. The program prepares individuals to become proficient in the planning, organizing, directing and controlling of a business, including organizational and human aspects, with emphasis on various theories of management, managing economic resources and decision making. Emphasis is given to the ownership of small business enterprises. There is only one College Credit Certificate in Business Management. Students may select one of two options, but the certificate in Business Management is awarded only once.

Business Management - Small Business Management

College Credit Certificate | Code: 65042 | 24 credits

The Business Management College Credit Certificate program is the third in a series of three College Credit Certificate programs designed to prepare students for the positions of manager trainee, supervisor or small business owner. It also provides supplemental training for persons previously or currently engaged in these activities. The program prepares individuals to become proficient in the planning, organizing, directing and controlling of a business, including organizational and human aspects, with emphasis on various theories of management, managing economic resources and decision making. Emphasis is given to the ownership of small business enterprises. There is only one College Credit Certificate in Business Management. Students may select one of two options, but the certificate in Business Management is awarded only once.

Business Operations - Accounting/Budgeting

College Credit Certificate | Code: 65021 | 18 credits

The Business Operations College Credit Certificate program is the second in a series of three College Credit Certificate programs designed to prepare students for employment and advancement in the following areas: accounting/budgeting, business/ management, customer service, finance, human resources, international business, marketing, nonprofit, real estate, retail and small business. There is only one College Credit Certificate in Business

Operations. Students may select one of 6 options, but the certificate is awarded only once.

Business Operations - Business Management

College Credit Certificate | Code: 65022 | 18 credits

The Business Operations College Credit Certificate program is the second in a series of three College Credit Certificate programs designed to prepare students for employment and advancement in the following areas: accounting/budgeting, business/ management, customer service, finance, human resources, international business, marketing, nonprofit, real estate, retail and small business. There is only one College Credit Certificate in Business Operations. Students may select one of 6 options, but the certificate is awarded only once.

Business Operations - Human Resources

College Credit Certificate | Code: 65025 | 18 credits

The Business Operations College Credit Certificate program is the second in a series of three College Credit Certificate programs designed to prepare students for employment and advancement in the following areas: accounting/budgeting, business/ management, customer service, finance, human resources, international business, marketing, nonprofit, real estate, retail and small business. There is only one College Credit Certificate in Business Operations. Students may select one of 6 options, but the certificate is awarded only once.

Business Operations - International Business

College Credit Certificate | Code: 65026 | 18 credits

The Business Operations College Credit Certificate program is the second in a series of three College Credit Certificate programs designed to prepare students for employment and advancement in the following areas: accounting/budgeting, business/ management, customer service, finance, human resources, international business, marketing, nonprofit, real estate, retail and small business. There is only one College Credit Certificate in Business Operations. Students may select one of 6 options, but the certificate is awarded only once.

Business Operations - Marketing

College Credit Certificate | Code: 65027 | 18 credits

The Business Operations College Credit Certificate program is the second in a series of three College Credit Certificate programs designed to prepare students for employment and advancement in the following areas: accounting/budgeting, business/ management, customer service, finance, human resources, international business, marketing, nonprofit, real estate, retail and small business. There is only one College Credit Certificate in Business Operations. Students may select one of the 7 options, but the certificate is awarded only once.

Business Operations - Small Business

College Credit Certificate | Code: 65031 | 18 credits

The Business Operations College Credit Certificate program is the second in a series of three College Credit Certificate programs designed to prepare students for employment and advancement in the following areas: accounting/budgeting, business/ management, customer service, finance, human resources, international business, marketing, nonprofit, real estate, retail and small business. There is only one College Credit Certificate in Business Operations. Students may select one of 6 options, but the certificate is awarded only once.

Business Specialist - Accounting/Budgeting

College Credit Certificate | Code: 65010 | 12 credits

The Business Specialist College Credit Certificate program is the first in a series of three College Credit Certificate programs designed to prepare students for employment in entry-level positions in the following areas: accounting/budgeting, business/ management, customer service, finance, human resources, international business, marketing, nonprofit, real estate, retail and small business. There is only one College Credit Certificate in Business Specialist. Students may select one of 8 options, but the certificate is awarded only once.

Business Specialist - Business Management

College Credit Certificate | Code: 65011 | 12 credits

The Business Management College Credit Certificate program is the third in a series of three College Credit Certificate programs designed to prepare students for the positions of manager trainee, supervisor or small business owner. It also provides supplemental training for persons previously or currently engaged in these activities. The program prepares individuals to become proficient in the planning, organizing, directing and controlling of a business, including organizational and human aspects, with emphasis on various theories of management, managing economic resources and decision making. Emphasis is given to the ownership of small business enterprises. There is only one College Credit Certificate in Business Management. Students may select one of two options, but the certificate in Business Management is awarded only once.

Business Specialist - General Business

College Credit Certificate | Code: 65100 | 12 credits

The Business Specialist College Credit Certificate is the first in a series of three College Credit Certificate programs designed to prepare students for employment in entry-level positions in the following areas: accounting/budgeting, business management, finance, general business, human resources, international business, marketing, and small business. Students may select one of the 8 options, but the certificate is awarded only once.

Business Specialist - Human Resources

College Credit Certificate | Code: 65014 | 12 credits

The Business Specialist College Credit Certificate program is the first in a series of three College Credit Certificate programs designed to prepare students for employment in entry-level

positions in the following areas: accounting/budgeting, business/management, customer service, finance, human resources, international business, marketing, nonprofit, real estate, retail and small business. There is only one College Credit Certificate in Business Specialist. Students may select one of 8 options, but the certificate is awarded only once.

Business Specialist - International Business

College Credit Certificate | Code: 65015 | 12 credits

The Business Specialist College Credit Certificate program is the first in a series of three College Credit Certificate programs designed to prepare students for employment in entry-level positions in the following areas: accounting/budgeting, business/management, customer service, finance, human resources, international business, marketing, nonprofit, real estate, retail and small business. There is only one College Credit Certificate in Business Specialist. Students may select one of 8 options, but the certificate is awarded only once.

Business Specialist - Marketing

College Credit Certificate | Code: 65016 | 12 credits

The Business Specialist College Credit Certificate program is the first in a series of three College Credit Certificate programs designed to prepare students for employment in entry-level positions in the following areas: accounting/budgeting, business management, finance, human resources, international business, marketing, small business. There is only one College Credit Certificate in Business Specialist. Students may select one of the 7 options, but the certificate is awarded only once.

Business Specialist - Small Business

College Credit Certificate | Code: 65020 | 12 credits

The Business Specialist College Credit Certificate program is the first in a series of three College Credit Certificate programs designed to prepare students for employment in entry-level positions in the following areas: accounting/budgeting, business/management, customer service, finance, human resources, international business, marketing, nonprofit, real estate, retail and small business. There is only one College Credit Certificate in Business Specialist. Students may select one of 8 options, but the certificate is awarded only once.

Chef Apprentice

College Credit Certificate | Code: 65059 | 12 credits

The Chef Apprentice Certificate is designed to prepare students with a theoretical and practical foundation for a successful career in the culinary industry. Credits earned can be applied to Associate in Science degree in Culinary Arts Management, which may be transferrable to upper division public institutions. *Students will be given opportunity to take the Food Safety exam for ServSafe Florida State Certification (State mandated for food handlers in Florida).

Cisco Certified Network Associate (CCNA)

College Credit Certificate | Code: 66050 | 16 credits

The Cisco Network Associate College Credit Certificate program is designed to provide an opportunity to establish a basic foundation in the field of Cisco network design and implementation, leading to certification as a Cisco Certified Network Associate (CCNA).

Commercial Transport Pilot

College Credit Certificate | Code: 68012 | 24 credits

The College Credit Certificate (CCC) in Commercial Transport Pilot will fill a growing need to train personnel in how to organize, review and classify aircraft records to comply with FAA regulations. Students will receive a wide-range of classroom and hands-on training that will provide the student with the education and knowledge to successfully manage the aircraft records department in an aviation company.

Computer Aided Design Assistant

College Credit Certificate | Code: 66070 | 14 credits

The Computer-Aided Design Assistant College Credit Certificate program is designed to prepare students to work as CAD assistants in an architectural office by acquiring a basic understanding of the architectural graphic skills needed to produce working and presentation drawings.

Computer Aided Design Operator

College Credit Certificate | Code: 66071 | 22 credits

The Computer-Aided Design Operator College Credit Certificate program is designed to prepare students in an architectural office by obtaining intermediate skills in architectural graphics needed to produce working and presentation drawings. After successfully completing the following courses, students can obtain employment assisting architects and drafters with computer-aided drawings and design presentations.

Computer Programmer - Business Applications

College Credit Certificate | Code: 66045 | 36 credits

The College Credit Certificate in Computer Programmer-Business Applications is designed to provide an opportunity to establish a foundation in computer programming for employment in scientific, commercial, industrial and government data processing applications. Graduates are prepared for positions as entry-level programmers, programmer specialists, and software developers for both applications and systems software.

Computer Programmer - Mobile Applications Development

College Credit Certificate | Code: 66036 | 36 credits

The College Credit Certificate in Computer Programmer-Mobile Applications Development is designed to provide an opportunity to establish a foundation in computer programming for employment in scientific, commercial, industrial and government data processing applications. The program additionally offers hands on

instruction with current technology for Apple and Android mobile device platforms.

Computer Specialist

College Credit Certificate | Code: 66033 | 27 credits

The Computer Specialist College Credit Certificate program is designed to prepare students to work as Computer Repair Assistants in a computer repair shop or the computer maintenance division of a corporation, by acquiring a basic understanding of computer internal architecture and operations. Students must successfully complete required courses.

Crime Scene Technician

College Credit Certificate | Code: 66072 | 28 credits

The College Credit Certificate in Crime Scene Technician will prepare students for employment in the field of criminalistics with a specialty in Crime Scene Investigation or Forensic Science. The student can serve as, but is not limited to, positions of Forensic Science Technician (SOC 194092), Crime Scene Technician, Medical Examiner Investigator, Medical Investigator, Insurance Investigator, Legal Investigator, Forensic Paralegal, Crime Scene Investigator, and Laboratory Technician. Students may also continue their formal education with the College and AS in Crime Scene Technology.

Cruise Line Operations

College Credit Certificate | Code: 65053 | 18 credits

All departments unrelated to navigation engine and entertainment, fall under the hotel division. This includes all concessionaires, housekeeping, food and beverage and pursers. Jobs in the hotel department on a cruise ship are very similar to jobs you will find in a hotel or resort. The hotel manager oversees all shipboard services and is responsible for supervising all staff and crew in these departments.

Culinary Arts Management Operations

College Credit Certificate | Code: 65060 | 18 credits

The Culinary Arts Management Operations College Credit Certificate is designed to prepare students with an in-depth study of food production, and a practical foundation in international cuisine for a successful career in the culinary industry. Credits earned can be applied to an Associate in Arts degree or an Associate in Science degree in Culinary Arts Management, which may be transferrable to upper division public institutions. *Students will be given opportunity to take the Food Safety exam for ServSafe Florida State Certification (State mandated for food handlers in Florida).

Digital Forensics

College Credit Certificate | Code: 66055 | 24 credits

The College Credit Certificate (CCC) in Digital Forensics will prepare graduates with the education and skills needed to fulfill roles and positions in the Information Security industry. The coursework will

include education and applied technical skills in the criminal justice and information security fields.

Digital Marketing Specialist

College Credit Certificate | Code: 65096 | 12 credits

The Digital Forensics program prepares students with the skills needed to fulfill forensic positions in the Information Security industry. The coursework prepares students with the technical competencies and knowledge needed to investigate system security breaches and recover lost or compromised data.

Digital Marketing Strategy

College Credit Certificate | Code: 65102 | 18 credits

The Digital Marketing Strategy College Credit Certificate is designed to prepare students to design, implement, manage and analyze digital marketing strategies and campaigns. Graduates will understand how to connect with consumers using multiple digital platforms to create effective customer-focused promotional campaigns.

Early Childhood Education - Administrator

College Credit Certificate | Code: 60004 | 12 credits

This is a College Credit Certificate with a specialization in Child Care Management. The purpose of this program is to prepare students as early childhood education administrators with the knowledge and skills to effectively manage a quality childcare program or to provide supplementary training for persons previously or currently employed in these occupations. This CCC will allow its holder to apply for a Advanced Director's Credential or continue their education.

Early Childhood Education - Child Development Early Intervention Specialization

College Credit Certificate | Code: 60007 | 36 credits

This is a College Credit Certificate (CCC) in Early Childhood Education (ECE) with a specialization in Child Development Early Intervention. The purpose of this program is to prepare students as early childhood educators who can identify learning differences in young children and meet their educational needs.

Early Childhood Education - Early Childhood Education Inclusion Specialization

College Credit Certificate | Code: 60006 | 12 credits

This is a College Credit Certificate in Early Childhood Education with a specialization in Early Childhood Inclusion. This is an introductory CCC for care practitioners who need training in addition to their initial credentials, i.e., Florida Child Care Professional Certificate (FCCPC) or the National Child Development Associate (N-CDA) credential in order to provide high quality early childhood education for all children.

Early Childhood Education - Preschool

College Credit Certificate | Code: 60003 | 12 credits

This is a College Credit Certificate in early childhood education with a Preschool specialization. The purpose of this program is to prepare students as early childhood education caregivers with a preschool

specialization or to provide supplementary training for persons previously or currently employed in these occupations. This CCC will allow its holder to apply for a National Child Development Associate credential enabling this student to pursue work as a childcare provider nationally or continue their education.

Emergency Medical Technician

College Credit Certificate - Health Sciences | Code: 63028 | 12credits

The Emergency Medical Technician – Basic College Credit Certificate is a one-semester program, which prepares students to function in the hospital and pre-hospital environment. Graduates of this program can perform clinical data collection, patient assessment and provide immediate care and safe relocation of the acutely ill and injured. Satisfactory completion of this program will qualify the graduate to sit for the State and/or National EMT Certification Examination. This program is approved by the State of Florida, Department of Health and Rehabilitative Services.

Engineering Technology Support Specialist

College Credit Certificate | Code: 66052 | 18 credits

This program offers a sequence of courses that provides students with the relevant technical knowledge and skills needed to prepare for further education and careers in the manufacturing career cluster.

Enterprise Cloud Computing

College Credit Certificate | Code: 66058 | 24 credits

The Enterprise Cloud Computing Credit Certificate program is designed to provide an opportunity to establish foundation in architect scalable, highly available application solutions that leverage cloud computing services utilizing best practices focusing on cloud security, cost, and reliability. Graduates will utilize core design patterns and infrastructure expertise to implement solutions to deploy and maintain workloads and applications.

Entrepreneurship

College Credit Certificate | Code: 65099 | 12 credits

This certificate is designed to provide students with the basic skills of starting and managing a business enterprise.

Film Production Fundamentals

College Credit Certificate | Code: 61001 | 24 credits

The Film Production Fundamentals College Credit Certificate (CCC) is designed to prepare students for entry-level employment in the motion picture industry. Students will understand the fundamentals in the following skills: lighting, grip, camera, audio recording, and editing.

Florida Funeral Director

College Credit Certificate | Code: 63024 | 31 credits

The Florida Funeral Director certificate program is intended for individuals who have obtained a prior degree from an accredited institution and intend to transition into a new career path. Funeral Directors arrange the details and handle the logistics of funerals,

assist the family in establishing the location, date, and time of wakes, memorial services, and burials, and determine whether the body should be buried, entombed, or cremated depending on the family's cultural and/or religious practices. The Florida Funeral Director certificate program will allow students to be eligible for the Florida Funeral Directors State Licensing Exam. This academic program is designed to meet specific state or professional needs. It is not accredited by the American Board of Funeral Service Education. Students graduating from this program are not eligible to take the National Board Examination or any state board examination for which graduation from an ABFSE accredited program is required.

Food & Beverage Management

College Credit Certificate | Code: 65051 | 30 credits

The Food Service Management College Credit Certificate program is designed to prepare students with a theoretical and practical foundation for a successful career in the food and beverage industry. Students enrolled in this program are prepared for positions such as Catering/Banquet Manager, Food & Beverage Manager, Restaurant Manager and Bar/Lounge Manager. Credits earned can be applied to an Associate in Science degree in Hospitality Management, which is fully transferable to public universities within the State of Florida.

Food and Beverage Operations

College Credit Certificate | Code: 65058 | 18 credits

The Food and Beverage Operations College Credit Certificate is designed to prepare students with an in-depth and practical foundation in management for a successful career in the food and beverage industry. Students enrolled in this certificate are prepared for positions such as Shift Supervisor, Restaurant Supervisor, or Bar/Lounge Supervisor. Credits earned can be applied to an Associate in Science degree in Hospitality Management, which is fully transferable to public universities within the state of Florida.

Food and Beverage Specialist

College Credit Certificate | Code: 65057 | 12 credits

The Food and Beverage Specialist College Credit Certificate is designed to prepare students with a theoretical and practical foundation for a successful career in the food and beverage industry. Students enrolled in this certificate are prepared for positions such as Restaurant Server, Room Service Attendant, or Banquet Set-Up Staff. Credits earned can be applied to an Associate in Science degree in Hospitality Management, which is fully transferable to public universities within the state of Florida.

Graphic Design Support

College Credit Certificate | Code: 61002 | 15 credits

The Graphic Design Support College Credit Certificate (CCC) is designed to prepare students for initial employment as a graphic design assistant, graphic production artist, or to provide supplemental training for persons previously or currently employed in these occupations.

Healthcare Informatics Specialist

College Credit Certificate - Health Sciences | Code: 63029 | 24 credits

This program is designed to prepare students for employment in various healthcare settings where the Electronic Health Record is being implemented or maintained. Students will learn the concepts of collection of health information, integration of technology into the management of healthcare records, basic concepts in health data management, and database management in a healthcare setting.

Help Desk Support Technician

College Credit Certificate | Code: 66037 | 16 credits

The Help Desk Support Technician College Credit Certificate is designed to prepare students with the technical knowledge and skills for employment as entry-level computer help desk and support technicians in commercial, industrial and government institutions. Graduates are also prepared for CompTIA A+ and Network+ industry certifications.

Horticulture Professional

College Credit Certificate | Code: 63025 | 18 credits

The College Credit Certificate in Agriscience for the Horticulture Professional is an advanced certificate for managerial positions in nursery and landscape technology industries. The certificate will prepare students for employment in horticulture and landscape industries as nursery managers, landscape and grounds keeping managers, nursery supervisors, landscape gardeners, and parks workers. Students will learn concepts of plant physiology and growth, plant classification, plant identification and plant care and maintenance to satisfy the growing needs of the nursery industry with an additional emphasis on management skills. If a student should choose to continue their education in Agriscience, the college credits granted in this program will apply toward an A.S. degree in Landscape and Horticulture Technology.

Horticulture Specialist

College Credit Certificate | Code: 63026 | 12 credits

The College Credit Certificate in Agriscience for the Horticulture Specialist is an introductory certificate designed to prepare students for positions in the nursery and landscape industries at the entry level. The certificate will prepare students for employment as supervisors in grounds keeping, nursery and greenhouse production, landscape gardeners, and parks workers. Students will learn plant physiology and growth, plant classification, plant identification and plant care and maintenance to satisfy the growing needs of the nursery industry. If a student should choose to continue their education in Agriscience, the college credits granted in this program will apply toward an A.S. degree in Landscape and Horticulture Technology.

Infant/Toddler Specialization

College Credit Certificate | Code: 67014 | 12 credits

This program is designed to prepare students as early childhood education caregivers with an infant/toddler specialization or provide supplementary training for persons previously or currently employed

in these occupations. Students will learn essential components of quality care and education including, but not limited to early childhood education, guidance techniques, establishing and maintaining a safe and healthy learning environment, rules and regulations, family interactions, nutrition, child growth and development and professional responsibilities. Employment opportunities include in home or center based programs for infants/toddlers.

Information Technology Support

College Credit Certificate | Code: 66044 | 28 credits

The Information Technology Support program is designed to provide an opportunity to establish a basic foundation in computer applications for employment in scientific, commercial, industrial and government institutions. Graduates are prepared for positions as data-entry specialists, software applications specialists and office systems specialists to meet the demands of today's automated offices.

Intermodal Freight Transportation

College Credit Certificate | Code: 68011 | 18 credits

This certificate provides specialized knowledge in the intermodal transportation of goods. It covers technical skills, procedures, processes and occupation-specific skills that will enhance employability. This certificate is part of the Associate in Science degree in Transportation and Logistics.

International Freight Transportation

College Credit Certificate | Code: 68010 | 15 credits

This certificate provides specialized knowledge in the area international movement of freight. It covers the regulations and policies governing international shipments and border security, the intermodal transportation of international freight, the regulatory agencies and the documents and processes involved. This certificate is part of the Associate of Science Degree in Transportation and Logistics.

Internet of Things (IoT) Applications

College Credit Certificate | Code: 66057 | 24 credits

The Internet of Things (IoT) Applications College Credit Certificate prepares students with multidisciplinary workforce skills and provides an accelerated credential that is useful for immediate employment and career experience. Graduates of the CCC in the IoT Applications acquire a skill-set that leads to producing connected devices by developing applications that can run on microcontroller development boards, simulating the functioning of the devices, and building physical prototypes. Upon completion of the program, the student will have learned how to program in the dominant programming languages used in IoT, completed projects that they can include in their portfolio, and configured different single board computers.

Lean Manufacturing

College Credit Certificate | Code: 68001 | 12 credits

This certificate prepares students for initial employment with an occupational title as a Quality Specialist or Lean Specialist in various specialized areas. It also can provide supplemental training for persons previously or

currently employed in these occupations. These courses can be applied toward the Associate of Science in Advanced Manufacturing.

Logistics and Transportation Specialist

College Credit Certificate | Code: 63019 | 18 credits

The Logistics and Transportation Specialist College Credit Certificate (CCC) will prepare students for further education and employment in the Transportation, Distribution and Logistics career cluster. The program content is broad-based to reflect the cross-functional relationships prevalent in supply chain management. Students are exposed to related business practices such as standard operating procedures, negotiation techniques, planning, organizing, and accounting concepts, purchasing, sustainability, warehousing, project management, quality control, import/export, and asset management theory. Emphasis is placed on understanding the planning, acquisition, flow, and distribution of goods and services while managing the complexity of operational linkages in a fast-paced global supply chain.

Marketing Operations

College Credit Certificate | Code: 65008 | 30 credits

The Marketing Operations College Credit Certificate program is designed to prepare students for employment as advertising and display specialists, marketing, advertising, public relations manager, public relations specialists or to provide supplemental training for persons previously or currently employed in these occupations.

Mechatronics

College Credit Certificate | Code: 66053 | 30 credits

This program offers students instruction in maintenance techniques, computer aided drafting/design skills, technical communications, maintenance and operation of various industrial components, quality control and testing, material handling protocols, and proper usage of tools and instrumentation.

Microcomputer Repairer/Installer

College Credit Certificate | Code: 66032 | 15 credits

The Microcomputer Repairer/Installer College Credit Certificate program is designed to prepare students to work as Computer Repair Assistants in a computer repair shop or the computer maintenance division of a corporation, by acquiring a basic understanding of computer internal architecture and operations. Students must complete the courses listed below.

Mortgage Finance

College Credit Certificate | Code: 62004 | 31 credits

The Mortgage Finance College Credit Certificate program is a 31 College Credit Certificate program, which applies towards an Associate in Science in Financial Services degree. It is designed to develop entry-level professionals to work in Mortgage Finance, with an emphasis in Affordable Housing. A major goal of this program is to increase the role and level of minorities in the Mortgage Finance industry.

Network Security

College Credit Certificate | Code: 66059 | 20 credits

The College Credit Certificate (CCC) in Network Security will prepare graduates with the education and skills needed to fulfill roles and positions in the Information Security industry. The coursework will include education and applied technical skills in the networking and information security fields.

Network Server Administration

College Credit Certificate | Code: 66035 | 24 credits

The Network Server Administration College Credit Certificate is designed to prepare students with a foundation in how to implement, support, and maintain Microsoft-based servers and clients. Graduates are prepared for employment as entry-level network administrators, network technicians, information technology support specialists, network coordinators and as candidates for industry certifications.

Network Systems Developer

College Credit Certificate | Code: 66034 | 41 credits

The Network Systems Developer College Credit Certificate is designed to prepare students to work as Computer Repair Technicians in a computer repair shop or the computer maintenance division of a corporation, by acquiring an in-depth understanding of computer internal architecture, operations and digital systems design operations.

Oracle Certified Database Administrator

College Credit Certificate | Code: 66048 | 16 credits

The Oracle Certified Database Administrator College Credit Certificate program is designed to provide an opportunity to establish a basic foundation in the field of database administration for employment in commercial, industrial and government institutions. Graduates are prepared for the position of Oracle Database Administrator.

Paramedic

College Credit Certificate - Health Sciences | Code: 63027 | 42 credits

The Paramedic College Credit Certificate provides students with the advanced skills, knowledge, and clinical experience required to provide safe and effective hospital and pre-hospital care to the sick and injured. Satisfactory completion of the program will qualify the graduate to sit for the State and/or National Paramedic Certification Examination. This program is accredited by the Commission on Accreditation of Allied Health Education Programs ([HYPERLINK "https://www.caahep.org/"](https://www.caahep.org/) www.caahep.org) upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP) and approved by the State of Florida, Department of Health and Rehabilitative Services.

Passenger Service Agent

College Credit Certificate | Code: 66028 | 16 credits

The Passenger Service Agent College Credit Certificate program is designed to give students the skills required to gain employment as

a passenger service agent, including gate and ramp responsibilities. Students will be required to do an internship with a commuter or major airline. Contact the Aviation Department at 305-237-5950 for more information and advisement

Rapid Prototyping Specialist

College Credit Certificate | Code: 66054 | 12 credits

This program prepares students for entry level positions as Rapid Prototypers or 3d Modeler/Designer. The program provides the technical skills proficiency and competency-based applied learning that contributes to the academic and career knowledge for students entering the advanced manufacturing industry.

Rooms Division Management

College Credit Certificate | Code: 65048 | 30 credits

The Rooms Division Management College Credit Certificate program is designed to prepare students with a theoretical and practical foundation for a successful career in the hotel sales and marketing industry. Students enrolled in this certificate are prepared for positions such as Front Desk Manager, and Guest Relations Manager. Credits earned can be applied to an Associate of Applied Science degree in Hospitality and Tourism Management.

Rooms Division Operations

College Credit Certificate | Code: 65056 | 19 credits

The Rooms Divisions Operations College Credit Certificate is designed to prepare students with a theoretical and practical foundation for a successful career in the lodging industry. Students enrolled in this certificate are prepared for positions such as Front Desk Supervisor or Guest Relations Supervisor. Credits earned can be applied to an Associate in Science degree in Hospitality Management, which is fully transferable to public universities within the state of Florida.

Rooms Division Specialist

College Credit Certificate | Code: 65055 | 13 credits

The Rooms Divisions Specialist College Credit Certificate is designed to prepare students with a theoretical and practical foundation for a successful career in the lodging industry. Students enrolled in this certificate are prepared for positions such as Front Desk Agent, Guest Relations Agent, or Reservation Clerk. Credits earned can be applied to an Associate in Science degree in Hospitality Management, which is fully transferable to public universities within the state of Florida.

Solar Energy Systems Specialist

College Credit Certificate | Code: 66056 | 18 credits

The College Credit Certificate (CCC) in Solar Energy Systems Specialist will fill a growing need to train personnel in how to build and install Solar Photo-Voltaic panels in both commercial and private structures. Students will receive a wide-range of classroom and hands-on training that will provide the student with the education and knowledge of the following grid connect solar power systems, off grid solar-remote power systems, commercial and medium scale solar, solar hot water, solar hydronics/thermal, and solar water pumping.

Tax Specialist

College Credit Certificate | Code: 65076 | 12 credits

The College Credit Certificate in Tax Specialist will prepare students to fill out the necessary forms for their clients or for the businesses in which they work. In addition, students will learn how to reduce taxable income and discover the current income tax regulations and their impact on individuals, couples, families, and business owners. In addition, students will gain a working knowledge about business income, tax credits, itemized deductions, LLCs and S Corps, retirement plans, and home businesses.

Television Studio Production

College Credit Certificate | Code: 61003 | 12 credits

The Television Studio College Credit Certificate (CCC) is designed for students who intend to seek employment in radio, television and production companies, as well as allied fields such as in-house educational and industrial studios. The curriculum stresses hands-on equipment use in TV laboratories. Students will have access to high-end cameras, editing suites and video graphics animation facilities and will complete portfolio-quality productions.

Translation and Interpretation

College Credit Certificate | Code: 64052 | 18 credits

This College Credit Certificate (CCC) focuses on the basic preparation needed for a career in Translation and Interpretation. Students learn how language functions and apply this knowledge to the development of Sight and Consecutive Interpretation skills. The development of basic translation competencies is also covered with emphasis on the use of Computer Assisted Translation software.

Virtual and Augmented Reality Technologies

College Credit Certificate | Code: 66060 | 19 credits

The program will teach students the fundamentals of Virtual and Augmented Reality. Students will learn basic concepts, history and tools commonly used for stereoscopic image acquisition and immersive technologies. Students will also learn the origins of Virtual Reality (VR) and its current role in the industry, its applications and opportunities and how to generate and manipulate VR imagery.

CAREER TECHNICAL EDUCATION (CTE) CERTIFICATES

Career Technical Education (CTE) Certificates prepare students to enter a specific career or vocation. To

complete a program, students must demonstrate that they have mastered specific job-related performance requirements as well as communication and computation competencies and will be awarded a Career Technical Certificate (CTC) upon completion. CTE certificates vary in length depending on the complexity of the requirements. Students entering CTE certificates greater than 450 hours will be tested for basic communication, computation and reading skills, also known as the Tests of Adult Basic Education (TABE). Students who score below the required Department of Education grade level designated for each program will be required to take appropriate basic skills training prior to the completion of their respective programs (§233.0695, F.S.).

CTC students are eligible for financial aid provided they are enrolled in a CTE certificate that is 600 credit hours or greater. Health Science certificates are offered at the Medical Campus. Students interested in any of the Health Science certificates are encouraged to consult advisors in the New Student Center to receive the most current information regarding program admission.

Advanced Automotive Service Technology - Tesla Technician

Career Technical Certificate | Code: 51000 | 26.66 credits

The Tesla Technician Career Technical Certificate, an intensive 15-week electric vehicle service training program designed to provide students with the skills necessary for a successful career with Tesla. During the course of the program, students will develop technical expertise and earn certifications through a blended approach of in-class theory, hands-on labs and self-paced learning. Upon successful completion of the program, graduates have the certification necessary for job placement as Service Technicians at one of Tesla's Service Centers across the country, including South Florida.

Aircraft Structural Assembly and Fabrication Apprenticeship

Career Technical Certificate | Code: T64010R | 143.20 credits

The Career Technical Certificate (CTC) in Aircraft Structural Assembly and Fabrication Apprenticeship will prepare the student to perform scheduled and non-scheduled maintenance and repairs on aircraft. The student will assist aviation maintenance technicians in commercial jet modifications, minor and major maintenance checks and corrosion control and preventions, and line services for a wide array of commercial and military aircraft.

Business Computer Programming

Career Technical Certificate | Code: 55023 | 40 credits

The Business Computer Programming program offers a broad foundation of knowledge and skills expanding the traditional role of the Junior Programmer. The content includes converting problems into detailed plans; writing code in computer languages, testing,

monitoring, debugging, documenting, and maintaining computer programs; and designing programs for specific uses and machines. Test of Adult Basic Education (TABE) is required.

Correctional Officer - State

Career Technical Certificate | Code: 57021 | 14 credits

Correctional Officers in the State of Florida. All criminal justice standards and training, Department of Education, and local standards will be met. Graduates are eligible for employment with any correctional agency in the state upon graduation from the program and successful completion of the State Certification Exam. Topics include human behavior, law, communications, facility operations, first aid and other related topics. There is emphasis on practical applications and competency-based performance. This program is offered at the School of Justice. Students seeking entrance into the MDC School of Justice basic recruit training programs for a career in corrections are required to pass a physical screening, physical agility, Voice Stress Analysis Test, psychological test, fingerprinting and background check and the Basic Abilities Test. For more information please contact the School of Justice and/or visit <https://www.mdc.edu/justice/assessment-center.aspx>.

Fire Fighter Minimum Standards

Career Technical Certificate | Code: 57004 | 15 credits

The purpose of the Fire Fighting program is to prepare students for employment and certification as a firefighter in accordance with Florida Statutes 633. The program is approved by the division of state fire, bureau of fire standards and training. Test of Adult Basic Education (TABE) is required.

Fire Fighter/Emergency Medical Technician - Combined

Career Technical Certificate | Code: 58000 | 25 credits

The Combined Fire Fighter/Emergency Medical Technician (EMT) certificate will prepare graduates with the technical skills needed fulfill roles and positions in the fire service and Emergency Medical Services (EMS) industry. The coursework will include applied technical skills in both firefighting and emergency medical services. The combined Fire Fighter/Emergency Medical Technician (EMT) certificate is for School of Justice students only.

Florida CMS Law Enforcement BRT

Career Technical Certificate | Code: 57022 | 25.66 credits

The Law Enforcement Officer program prepares students for certification as Police Officers in the State of Florida. All criminal justice standards and training, Department of Education, and local standards will be met. Graduates are eligible for employment with any law enforcement agency in the state upon graduation from the program and successful completion of the State Certification Exam. Topics include law, human issues, patrol, traffic, investigations and communications. There is an emphasis on practical applications and competency-based performance. This program is offered at the School of Justice. Students seeking entrance into the MDC School of Justice basic recruit training

programs for a career in law enforcement are required to pass a physical screening, physical agility, Voice Stress Analysis Test, psychological test, fingerprinting and background check and the Basic Abilities Test. For more information please contact the School of Justice and/or visit <https://www.mdc.edu/justice/assessment-center.aspx>.

Massage Therapy - Accelerated Option

Career Technical Certificate – Health Sciences | Code: 53030 | 25 credits

The Massage Therapy program prepares individuals to provide various techniques of massage of the back, head, and feet including reflexology, rolling, trigger point therapy. There is an emphasis on the therapist/client relationship and record management for clients and payment. Upon successful completion of this program, the graduate is eligible to sit for the State of Florida Massage Therapy licensure examination.

Massage Therapy - Generic Option

Career Technical Certificate – Health Sciences | Code: 53029 | 25 credits

The two-semester program prepares individuals to provide various techniques of massage of the back, head, and feet including reflexology, rolling, trigger point therapy. There is an emphasis on the therapist/client relationship and record management for clients and payment. Upon successful completion of this program, the graduate is eligible to sit for the State of Florida Massage Therapy licensure examination. Test of Adult Basic Education (TABE) maybe required.

Massage Therapy - Transitional Option

Career Technical Certificate – Health Sciences | Code: 53031 | 25 credits

The Massage Therapy program prepares individuals to provide various techniques of massage of the back, head, and feet including reflexology, rolling, trigger point therapy. There is an emphasis on the therapist/client relationship and record management for clients and payment. Upon successful completion of this program, the graduate is eligible to sit for the State of Florida Massage Therapy licensure examination.

Medical Assisting

Career Technical Certificate – Health Sciences | Code: 53027 | 43.30 credits

The Medical Assisting program, which is 1 year (3 semesters) in length, prepares individuals to provide health services in ambulatory out-patient facilities, including medical offices and clinics. Medical Assistants participate in diagnostic, clinical, and administrative functions. Diagnostic functions include drawing blood, performing basic laboratory tests, and taking EKG's and X-Rays. Clinical functions include obtaining vital signs, preparing patients for and assisting with examinations and procedures, administering medications and performing treatments. Administrative functions include serving as receptionists, scheduling appointments and diagnostic procedures, managing records, completing insurance coding, and providing for

billing and collecting. Medical Assistants use computer technology to manage records, billing and other aspects of a medical office or clinic. Students participate in an externship each semester to gain experience in every aspect of the medical assistant's practice. Test of Adult Basic Education (TABE) maybe required.

Medical Coder/Biller

Career Technical Certificate – Health Sciences | Code: 53028 | 36.97 credits

The Medical Coder/Biller program prepares individuals for employment as Medical Coder/Billers. The student will learn to translate diagnoses and procedures into numerical designation (coding) using the International Classification of Diseases (ICD-9-CM) and Current Procedural Terminology (CPT-4). The program involves coding, classifying and indexing diagnoses and procedures for purposes of standardization, retrieval and statistical analysis. The student will also be trained to prepare and file medical insurance claim forms for reimbursement. Electronic claims transmission is included. There is special emphasis on ethical and legal responsibilities, data quality, financial reimbursement, Diagnosis Related Groups (DRGs) and Ambulatory Patient Classification (APCs). Test of Adult Basic Education (TABE) maybe required.

Medical Record Transcribing

Career Technical Certificate – Health Sciences | Code: 53026 | 40 credits

The Medical Record Transcribing program prepares individuals to transcribe medical records from recorded dictation. The individual prepares and types reports in appropriate format for use by health care facilities, physicians, insurance companies, legal proceedings and research specialists. Test of Adult Basic Education (TABE) is required.

PC Support Services

Career Technical Certificate | Code: 55022 | 30 credits

The PC Support Services program offers a broad foundation of knowledge and skills to prepare students for employment in PC support services positions. The content includes software applications and operating systems including the use of advanced software/system features and programs; computer networking and network administration. The 900 contact hours include both microcomputer and general business courses. Hands-on experience is an integral part of the program. Activities include the use of microcomputers, and peripheral equipment with widely used business applications software, database and other applications. Test of Adult Basic Education (TABE) is required.

Pharmacy Technician

Career Technical Certificate – Health Sciences | Code: 53025 | 35 credits

The Pharmacy Technician program prepares individuals for employment as Pharmacy Technicians. The Pharmacy Technician works primarily in retail and hospital pharmacies under the supervision of a registered pharmacist in the packaging and distribution of medication. Test of Adult Basic Education (TABE) maybe required.

Phlebotomy Technician

Career Technical Certificate – Health Sciences | Code: 53024 | 5.50 credits

The Phlebotomy Technician program is designed to prepare students for employment in a hospital laboratory, blood center, or other health care facility to draw blood by venipuncture and capillary puncture. Students are taught safe and efficient work practices in obtaining adequate and correct blood specimens, labeling specimens, and transporting specimens correctly to the appropriate laboratory sections. The Center for Disease Control (CDC) guidelines for HIV/AIDS, Hepatitis B and other diseases are stressed.

Private Investigator Intern

Career Technical Certificate | Code: 57023 | 1.33 credits

The purpose of this 40 hour program is to prepare students for employment as Private Investigator Interns as required by Section 493.6203(6)(b) Florida Statutes. The student will learn what private investigation means and about obtaining information with reference crimes, identities, habits of persons or groups, credibility of witnesses, missing persons, location or recovery of lost or stolen property and more. School License DS 8900048

Private Security Officer

Career Technical Certificate | Code: 57006 | 1.27 credits

Part A The first 42 hours is designed to prepare students to apply for Class "D" Private Security Officer license in FL. Students will learn regulatory compliance, emergency procedures, ethics and entrepreneurship, courtroom procedures, traffic direction and crowd control, and more. Part B 28 hrs.is designed to prepare the student for compliance with the state minimum training standard for a class "G" (armed) security guard license. Special Fee School License DS 8900048

COLLEGEWIDE ACADEMIC SCHOOLS

The College has adopted a management approach to the delivery of occupational and technical education, including respective transfer options through a system of collegewide schools. The primary objective is to serve students more effectively and efficiently, provide more accessible programs countywide, and be more responsive to the needs of business and industry.

Benjamín León School of Nursing

The Benjamín León School of Nursing is accredited by

the Accreditation Commission for Education in Nursing (ACEN) (3343 Peachtree Road NE, Suite 850, Atlanta, Georgia 30326, 404-975-5000, info@acnursing.org) and offers a Bachelor of Science in Nursing (BSN) degree to provide students and practicing nurses with a high-quality, accessible, cost-effective and seamless academic program designed to meet the critical workforce need for baccalaureate-prepared nurses in the state of Florida. Students entering the BSN program must have an earned Associate in Science in Nursing (ASN) from a regionally accredited institution/regionally accredited ASN program and an active license as a registered professional nurse (RN).

The Benjamín León School of Nursing also offers the Associate in Science degree in Nursing, leading to eligibility to apply for the licensing examination for registered nurse practice (NCLEX-RN). The Associate in Science program offers four options designed to meet the needs of individual learners (generic, transitional bridge and accelerated and part-time tracks) and all combine class work with clinical nursing experiences in local hospitals and agencies. Students entering the associate degree program should possess college-level cognitive, communication and computational skills. Specific general education and science courses are included in the curriculum; selected courses are required before admission to these health care programs.

Miguel B. Fernandez Family School of Global Business, Trade and Transportation

The Miguel B. Fernandez Family School of Global Business, Trade and Transportation offers a full range of academic programs to prepare students for careers in business or to start a successful business of their own. Course offerings are available in a wide number of disciplines including accounting, business administration, economics, entrepreneurship, management, marketing, international business, supply chain and logistics, and financial services. The School of Business has a long tradition of preparing students to meet the needs of the local workforce and partnering with industry to offer students cutting-edge instruction in various fields. The School has become known for excellence in providing customized training to meet industry needs. School of Business courses are offered at the North, Kendall, Wolfson, Homestead, Eduardo J. Padrón and Hialeah campuses and West Campus, as well as through Virtual College. Academic options include:

- Bachelor of Applied Science (BAS) in Supervision and Management with emphasis on critical thinking and problem solving, skills in high demand among employers worldwide. The BAS in Supervision and Management provides knowledge in a range of organizational settings such as personnel management,

organizational behavior, international and small business, finance, business ethics, and leadership. Graduates in this field will develop effective interpersonal skills, foster decision-making and entrepreneurial thinking, and become familiar with diverse business environments.

- Bachelor of Applied Science (BAS) in Supply Chain Management provides knowledge to the supply chain and explores the risks, logistics, economics, regulatory issues, resource allocation, production planning, inventory management and other functions basic to business. Due to the globalization of business, graduates in this field can find employment within the supply chain, logistics and transportation fields.
- Associate in Arts (AA) with a pathway to a degree in accounting, business administration or economics. The Associate in Arts degree is designed for students wishing to transfer to colleges or universities for upper-division coursework. The areas of concentration parallel university coursework and prepare students to enter their junior year at four-year institutions upon completion of the AA degree.
- Associate in Science (AS) in a broad range of business functions including accounting, entrepreneurship, management and marketing. The Associate in Science is designed to prepare students for immediate employment. Credits earned for many courses in these programs are acceptable to upper-division colleges or universities should the student decide to pursue a four-year degree.
- College Credit Certificates including accounting and financial services, entrepreneurship, international business, management and marketing. Focusing on a specific job or set of skills, these programs require fewer credits than an associate degree and are Florida Department of Education Certified College Credit programs. The credits granted will apply to the related AS degree.
- Eigh-Watson aviation programs provide students with the education and skills required for a successful aviation career. Associate in Science degrees include Aviation Administration, Aviation Maintenance Management, Professional Pilot Technology, Transportation and Logistics. Related College Credit Certificates include Air Cargo Management, Airline/Aviation Management, Airport Management, Intermodal Freight Transportation and International Freight Transportation; an Advance Technical Certificate in Certified Flight Instructor is also offered. Additionally, the School offers an aircraft dispatcher course and flight simulation training.
- Training techniques and simulation equipment to provide students with a hands-on approach to their

education at Miami International Airport, Miami Executive Airport, and the Homestead Campus. The following flight training courses are offered through contracted flight providers:

- ATF 2210 Commercial Pilot Flight (3 credits)
- ATF 2305 Instrument Pilot Flight (3 credits)
- ATF 2400 Multi-Engine Pilot Flight (1 credit)
- ATF 2501 Flight Instructor Flight Training (3 credits)
- Miami Culinary Institute. At the Miami Culinary Institute, you will gain the real-world and hands-on knowledge to create a perfect blend of classic skills and innovative techniques used by some of the world's best chefs. Our two-year Associate in Science degree in Culinary Arts Management, has been formulated to prepare students of all ages for dynamic careers in culinary arts. Our core philosophy of Food Culture Innovation requires an examination and understanding of the culture built upon our interaction with food. As culinary professionals, we understand the role we play and the responsibility we must own in elevating our community's expectations about the food they eat. We help our students understand the value of tracing our foods to their source to evaluate how a particular farm, ranch or fishery impacts our environment, community and economy. We examine how food distribution not only contributes to a significant portion of the world's greenhouse gasses, but also how we can make choices that will improve that process. We analyze how food is prepared to ensure that the best nutrition possible is delivered on each plate. Miami Culinary Institute is training the next great culinary professionals and arming them with the tools to innovate the way we interact with food.

Associate in Science in:

Culinary Arts Management

College Credit Certificate in:

Culinary Arts Management Operations

Chef's Apprentice

- Miami Hospitality Center. MDC's four-year and two-year academic programs offer a range of degree pathways that prepare you to enter the modern workforce or pursue higher educational goals.

Bachelor of Applied Science in:

Supervision and Management-Hospitality Concentration,

Associate in Arts pathway in:

Hospitality & Tourism Management

Associate in Science in:

Hospitality Administration/Travel & Tourism

College Credit Certificates in:

Cruise Line Operations

Food & Beverage Management

Food & Beverage Operations
 Food & Beverage Specialist
 Rooms Division Management
 Rooms Division Operations
 Rooms Division Specialist

School of Continuing Education and Professional Development

The School of Continuing Education and Professional Development's mission is to make the College more accessible to the public and to meet community needs not served by traditional college programs. Through the Continuing Education departments located on each campus, the school offers noncredit courses in recreational, continuing workforce education and adult education categories. Recreational courses cover a huge range of topics from aerobics to Zen, and they serve individuals wanting to enrich their cultural experiences, pursue interests or learn alongside others with similar interests.

Continuing workforce education courses are just-in-time courses intended to help students improve their professional or occupational skills. The topics covered include computer workshops, certification courses, preparing oral presentations, building contractor license exam preparation, as well as several hundred work-related topics. Adult education courses prepare the student to pass the GED test or master the basic skills needed for success in one of the College's accredited programs.

The School of Continuing Education & Professional Development endeavors to provide classes both on and off campus. The majority of classes are conducted in the evenings and on weekends at times that are most convenient to the students enrolling. In its effort to meet the diverse needs of a large, multifaceted community, the school also welcomes suggestions and requests for courses that are not being offered.

School of Education

Teaching is a vital and dynamic profession. A career in teaching offers the opportunity to influence children and shape the future. Trends in population growth, an aging teacher workforce and the demand for class size reduction will result in ample professional opportunities for prospective teachers. The School of Education provides training and professional development opportunities for pre-service teachers as well as practicing professionals.

The School offers a wide variety of programs in Early Childhood Education, K-12 Teacher Education preparation, alternative pathways to certification and teacher recertification.

- Early Childhood Education:

Students may earn College Credit Certificates (CCC) with an Infant/Toddler Specialization or Preschool Specialization that may lead to the National Child Development Associate credential and/or the Florida Child Care Professional Certificate (FCCPC). Students may earn a College Credit Certificate with an Administrator Specialization that may lead to the Director's Credential Level 1 or 2. Students may also earn a CCC in Inclusion or a CCC in Intervention Studies. All CCC lead directly to the AS degree program.

Students may earn an Associate in Science (AS) degree in early childhood education which will prepare students for immediate employment as early childhood practitioners or professionals in both the public school system or private school sector. All AS degrees are accredited by the National Association for the Education of Young Children. The AS degree leads seamlessly to the Bachelor of Science in Early Childhood Education from birth to grade three with endorsements in English for Speakers of Other Languages (ESOL), Prekindergarten Disabilities, and Reading.

- K-12 Teacher Education Programs:

Students may earn an Associate in Arts with the requisite courses needed for a baccalaureate degree in teaching. Students may complete a Bachelor of Science degree in ESE, secondary math or secondary biology, chemistry, earth/space science, or physics. The School's courses meet state certification requirements as a state-approved teacher preparation program. Students who complete the A.A. with requisite courses needed for a baccalaureate degree in teaching may transfer to state university colleges of education or private institution with junior-level standing.

K-12 Teacher Education programs are in the areas of: Exceptional Student Education (K-12), Mathematics Education (Grades 6-12), Biology Education (Grades 6-12), Chemistry Education (Grades 6-12), Earth/Space Science Education (Grades 6-12) and Physics Education (Grades 6-12).

The baccalaureate programs in education are designed to prepare future teachers to enter the teaching profession immediately after graduation. Upon program completion students meet all Florida Department of Education requirements including the successful completion of the certification exams, an e-Portfolio of artifacts that demonstrate Florida Educator Accomplished Practices, clinical experience in a variety of settings and grade levels, and a semester-long internship. Professional development workshops also are provided.

- Center for Professional Development:

The CPD is the post-baccalaureate branch of the

School of Education. Students may complete the substitute teacher training or a variety of teacher certification and recertification courses as well as endorsements in Autism Spectrum Disorders, ESOL, Gifted, Prekindergarten Disabilities, and Reading. Career changers who hold a bachelor's degree can become a state-certified teacher holding a Professional Certificate from Florida Department of Education in one year through the Educator Preparation Institute.

School of Engineering, Technology, and Design

The School of Engineering, Technology, and Design provides the dynamic knowledge, skill, hands-on training and industry connection to turn your dreams and imagination into achievable steps to realize the success you desire. Our vision is to provide students with unmatched opportunities and access to an outstanding curriculum taught by world-class faculty within the information technology and engineering fields. Our programs are strategically formulated to exceed the critical demands of the high-technology marketplace, providing students with a wide variety of options for success in the 21st century.

The School of Engineering, Technology, and Design is a Cisco Regional Networking Academy offering CCNA classes that lead to valuable industry certifications. These courses are available at most campuses. The School also provides instruction using official curriculum from companies like Microsoft, AWS and Oracle. With input from industry partners, including NextEra Energy, Baptist Hospital, Amazon, Visa, IBM, SAS, Dell, Oracle and Microsoft, our courses deliver the knowledge and skills that the nation's top employers are looking for.

The Engineering Department offers pathways to Associate in Arts programs in ten different fields. It also offers three unique Associate in Science programs in Computer Engineering Technology, Electronics Engineering Technology and Industrial Engineering Technology that provide the skills for high paying jobs. Students looking for short term programs with recognized credentials have access to College Credit Certificates in Mechatronics, Microcomputer Repairer/Installer, Rapid Prototyping Specialist, Engineering Technology Support Specialist and Computer Specialist.

The Technology department offers Associate in Arts degrees in Computer Science and Computer Information Systems, and Associate in Science degrees in emerging technologies. These include: Animation and Game Art, Business Intelligence, Computer Information Technology, Computer Programming and Analysis for Business, Mobile Apps and IoT, Cybersecurity, Database Technology, Game Development and Design, and Network Services Technology with tracks in Cloud Computing and Network Security.

At MDC's School of Engineering, Technology, and Design, you can earn a bachelor's degree in fields that are in high demand. Upon completion of an Associate in Arts degree or an Associate in Science, students can transition to the following baccalaureates:

Bachelor of Science in Data Analytics: This was the first undergraduate program in the state of Florida in data analytics. It prepares students for the booming field of big data across all industries. Students learn how to find patterns, apply statistics, and create data visualizations—all necessary skills to acquire positions as Data Analysts, Database Architects and Business Intelligence Analysts.

Bachelor of Science in Electrical and Computer Engineering Technology: This program opens plenty of doors to a variety of technology-related fields. Graduates are trained as engineering practitioners, ready to take on roles as Electronics Engineers, Manufacturing Engineers and Project Engineers.

Bachelor of Science in Information Systems Technology: The field of information systems continues to grow, offering graduates a wide range of lucrative and rewarding career opportunities. The program offers students the skills and knowledge to direct and control computerized information resources within an organization. Three concentrations are available for students to choose from: Cybersecurity, Networking and Applications Development.

Additional disciplines under the School of Engineering, Technology, and Design include:

- **Architecture and Interior Design.** Offering programs in:
 - Associate in Arts degree with pathways in:
 - Architecture
 - Building Construction
 - Interior Design
 - Landscape Architecture
 - Associate in Science degrees in:
 - Architectural Design and Construction Technology
 - Building Construction Technology
 - Interior Design Technology
 - College Credit Certificate in:
 - Computer Aided Design Assistant
 - Computer Aided Design Operator
- **Entertainment & Design Technology.** Offering design and media production programs in:
 - Bachelor of Applied Science in:
 - Film, Television & Digital Production
 - Associate in Arts degree with pathways in:
 - Computer Art Animation
 - Associate in Science degrees in:
 - Film Production Technology
 - Radio & Television Broadcasting
 - Music Business
 - Graphic Design Technology

Graphic Internet Technology
 Photographic Technology
 College Credit Certificate in:
 Film Production Fundamentals
 Television Studio Production
 Graphic Design Support
 Audio Technology

School of Health Sciences

The Medical Campus is committed to assisting qualified students interested in pursuing careers in the health science professions. Health Science professionals provide more than 60 percent of all health care administered in the United States. The School of Health Sciences offers more than 20 challenging vocational, certificate and degree programs, such as respiratory care, opticianry, clinical laboratory sciences and health information management.

Programs in the School of Health Sciences prepare students for employment in a wide variety of settings including hospitals, clinics, research centers, long term care facilities, physician's offices and wellness centers. In collaboration with more than 300 health care facilities throughout Miami-Dade County, students receive the necessary theory, laboratory experience and clinical practice. Students use state-of-the-art equipment and are supervised by licensed professional faculty. Health Science programs are fully accredited through their respective state and national associations. Most programs have limited access. Program completion affords the graduate the opportunity to seek employment in high-demand professions while receiving a competitive salary. Interested students are encouraged to contact the Medical Campus at 305-237-4141 to receive current information regarding program requirements, application procedures and selection process for the specific Health Science program of interest.

School of Justice, Public Safety, and Law Studies

The School of Justice, Public Safety and Law Studies, located on the North Campus, is a cooperative project between federal, state, county and local government agencies and Miami Dade College. The mission of the Miami Dade College-School of Justice, Public Safety and Law Studies is to offer valuable academic programs to degree seeking students and provide high quality workforce education to public safety professionals.

The School of Justice academic programs consist of an:

- A.A. pathway to Criminal Justice Administration
- A.S. in Criminal Justice Technology – Generic
- A.S. in Forensic Science
- A.S. in Crime Scene Technology
- A.S. in Computer Crime Investigations

- BAS with a major in Public Safety Management

The A.A. pathway in Criminal Justice Administration is transferable. It prepares students for upper division studies, such as transfer into the Bachelor of Applied Science Program. Students wishing to attend law school find this degree an important first step toward achieving their goal.

The BAS is a workforce education degree that combines rigorous academic training with hands-on, practical experience. It is a 120 credit hour program incorporating lower and upper division coursework, including the required 45 credit hours of electives and general education requirements, 30 credit hours of lower division requirements, 30 credit hours of upper division requirements, and 15 credit hours in one of three tracks.

The School of Justice workforce education programs are designed to develop and/or improve the knowledge, skills and abilities of public safety officers and individuals who aspire to hold positions in public safety including law enforcement officer, corrections officer and private sector security officers.

Basic Recruit Training: The School of Justice offers Basic Recruit Training Programs (B RTP) in the areas of law enforcement, corrections. Students who successfully complete one of the B RTP in Law Enforcement or Corrections, and who pass the State Officer Certification Exam, are eligible to receive academic credits toward an associate's degree in criminal justice. Credit conversion occurs in two separate phases.

Private Sector Security Training: Private sector training is provided to those who seek D (Security Officer), G (Statewide Firearm) and CC (Private Investigator Intern).

School of Science

Offering a variety of degrees and certificate programs, Miami Dade College's School of Science builds a strong foundation in the study of natural sciences. Whether starting a journey to an advanced degree or building skills for today's workforce, the School of Science offers a modern approach to learning that opens doors to discovery and success.

A Top Choice - Students choose the school's programs because of the quality curriculum, undergraduate research experiences, individual attention, small class sizes, internship opportunities and highly qualified and motivated instructors.

Engaging Industry - The School of Science collaborates with industry principally through student internships, a required component of the Bachelor of Science in Biological Sciences. An example is internship in a local biotechnology company. Students typically spend a semester working with an industry partner.

Research Focused - Students at the School of

Science are afforded the rich experience of authentic undergraduate scientific research, culminating in presentations at a number of regional, national and international conferences. There is year-round research and the 10-week Summer STEM Research Institute, for which students can apply and receive compensation for their work. Most research opportunities are within MDC, but there are a handful of options conducted at collaborating institutions in South Florida and beyond, including the University of Florida, Florida Atlantic University, Nova Southeastern University, St. Thomas University and the University of Miami.

Talented Teachers - Full-time faculty members at the School of Science are talented facilitators of knowledge and are highly qualified in various science fields. Faculty selection is a very competitive process as many exceptional instructors want to work here. The school's faculty is inventive in reaching students and leveraging technology and new teaching methods, resulting in higher success rates in rigorous STEM courses. Furthermore, the school's professors are frequent recipients of the Endowed Teaching Chair award for excellence at MDC. Many get invited to present the results of their research endeavors at scientific conferences.

- School of Science Programs:

Bachelor of Science in Biological Sciences Degrees (BS)

BSBS – Biopharmaceutical Science Concentration

BSBS – Biotechnology Concentration

BSBS – Science Education Concentration

Associate in Arts Pathways (AA)

Atmospheric Science & Meteorology

Biology

Chemistry

Environmental Science

Geology

Physics

Associate in Science Degrees (AS)

Biotechnology

Biotechnology – Bioinformatics

Biotechnology – Chemical Technology

Funeral Services

Landscape & Horticulture Technology

Advanced Technical Certificates (ATC)

Biotechnology

Biotechnology – Bioinformatics

Biotechnology – Chemical Technology

College Credit Certificates (CCC)

Biotechnology

Florida Funeral Director

Horticulture Professional

Horticulture Specialist

SPECIAL ACADEMIC AND OTHER PROGRAMS

In meeting its commitment to serve the community, Miami Dade College offers a variety of programs, both on and off campus, to meet the specific educational needs of the groups involved. These may take the form of specially structured programs on campus, courses, seminars or workshops offered at times and locations that best serve public interests and needs.

For example, MDC offers:

1. Assistance to companies and governmental agencies in conjunction with their own training programs;
2. Workshops, seminars and institutes in cooperation with business, professional or other groups;
3. Recreation, personal improvement and cultural activities;
4. Postsecondary occupational career offerings to serve business, industry, the professions and governmental agencies.
5. MDC Apprenticeship Program
6. Earn While You Learn
7. Miami Dade College is the first academic institution in Florida to receive the designation of Program Sponsor by the Florida Department of Education. As a Program Sponsor, MDC is authorized to register occupations, employers and apprentices to participate in Registered Apprenticeship. Apprenticeships are an earn-and-learn alternative for individuals to be employed while they attend school. Classroom instruction and on-the-job training are structured to complement each other, making apprentices productive in an abbreviated period of time. Through experiential learning, post-secondary credits and industry certifications, apprentices gain technical and high-level academic skills, equipping them to be lifelong learners. Apprenticeship is a promising approach to promoting diversity and equity within companies and the communities they serve; replacing a retiring workforce; keeping pace with technology; and reducing the burden of student loan debt.
8. Miami Dade College has three Registered Apprenticeship programs in the areas of Aviation, Information Technology, and Logistics and Transportation. The College plans to expand

its apprenticeships in the areas of Banking and Finance, Creative Design, Hospitality and Tourism, and Life Sciences and Health Care.

MDC WORKS: Career Studio

MDC WORKS Career Studio is a professional development resource that prepares MDC students for the workforce by giving them the skills, information and contacts to successfully launch their careers and create meaningful futures.

Launched in 2018 in collaboration with the U.S. Department of Labor and the Florida Department of Education, MDC WORKS Career Studio was the first program of its kind to integrate interactive, virtual and augmented reality into its career exploration process at an academic institution in Florida. MDC WORKS is free and automatically available to all MDC students. Students activate their personal Career Portal by signing in with their MDC email address and password. Once the portal is activated, students must confirm their registration via e-mail and then they will have access to apply to the thousands of job and internship postings and networking resources.

The MDC WORKS Career Studio provides the following services to students and alumni up to one year after their last class at MDC:

- Career Coaching
- Career Readiness Workshops & Resources
- Résumé Assistance
- Interview Preparation & Practice
- Networking Events
- Job & Internship Postings
- On-Campus & Virtual Employer Information Sessions
- Interviews with Employers
- Career Fairs and Hiring Events
- Online Career Portal to stay organized

MDC WORKS Career Studio serves all 8 Miami Dade College Campuses and assists all students who are seeking career readiness, internship and job placement assistance who are registered in associate and bachelor degree programs, as well as, GED, ESL and ESOL class's in-person, virtually, and over the phone at 305-237-9675 (WORK), mdcworks@mdc.edu, www.mdcworks.org.

In addition, MDC WORKS Career Studio offers a plethora of career readiness resources, support and downloadable resume templates on their website at www.mdcworks.org .

Center for Economic Education

(Eduardo J. Padrón Campus)

The mission of the Center for Economic Education is to work closely with the educational communities in Miami-Dade and Monroe counties to develop greater awareness for economic literacy. Among the most popular of

the Center's programs are the four recertification credit courses offered to area teachers in grades K-12. Of these, the national Stock Market Game is played in grades 5-12 in each of the major semesters. The Free Enterprise Bank Program, available to grades K-12, provides real money for class business activities. The Center works with area educational administrators to create and assist in the development of curriculum materials. These materials have included a tourism and development program, a Civics Teachers Resource Guide, Elementary Program of the Economics of the Stanford Achievement Test and many more program examples at each of the major grade levels.

It is the Center's goal to provide the latest and best materials and programs in economic education to our schools. Through these opportunities the Center seeks to promote greater understanding on the part of our young people about the economy in which they live and the economic climate in which they will work.

Cybersecurity Center of the Americas

(Wolfson Campus)

The Cybersecurity Center of the Americas is an all-in-one resource for those interested in building a career in cybersecurity, offering the most advanced education and hands-on experience in cybersecurity defense systems. The unique, customizable technology in place at the Center caters to all skill levels, allowing for a flexible learning environment for trainees of all backgrounds. The holistic training center provides programs for trainees of all skill levels, from beginners looking to enter the world of cybersecurity, to security experts looking to improve their skills and advance their careers. Dedicated to education and serving the community, the Cybersecurity Center of the Americas also hosts forums, speakers, and events.

Cloud Computing Center

(Eduardo J. Padrón Campus)

The Cloud Computing Center serves as a Cloud Computing hub where technology leaders, industry experts and students can engage and collaborate. The Center houses the College Credit Certificate and Associate of Science degrees in Enterprise Cloud Computing, and exposes students and existing IT professionals to industry leading cloud platforms and industry certifications needed to fill increasing demand of IT cloud jobs in the workplace. The Center also hosts Cloud Computing accelerated training programs, summer camps, forums, speakers and events as Miami Dade College continues to serve the community.

Center for Financial Training

(Wolfson Campus)

The Center for Financial Training Southeastern (CFTSE) is a local training provider of the American Bankers

Association (ABA). As the largest industry-sponsored adult education program in the world for financial services professionals, CFTSE benefits more than 3,500 financial services professionals locally and is one of 20 centers located throughout the United States.

CFTSE is a unique source for commercial banking and financial industry training and education. CFTSE is a nonprofit educational organization that conducts college credit courses (live classes, guided self-study and online), seminars, webinars, computer workshops and customized and contract training.

Students can earn CFTSE and/or American Bankers Association (ABA) diplomas and certificates that are recognized throughout the industry and accepted as college credit. Students can also earn Banking College Credit Certificates. CFTSE has established an academic partnership with Miami Dade College, enabling CFTSE students to achieve degree status while completing their financial services studies. CFTSE courses are offered at all MDC campuses, and at certain financial institutions. All courses are open to the public however, special fees are charged by CFTSE for certification and materials. The fee structure varies depending on whether the student is a member or nonmember of CFTSE. The fee is charged in addition to MDC tuition and is paid to CFTSE. CFTSE also offers special programs in partnership with MDC, to include financial literacy workshops and the Future Bankers' Camp. The Future Bankers' Camp is a partnership between CFTSE, MDC - School of Business and Miami Dade County Public Schools - Academy of Finance.

Continuing Education

The School of Continuing Education and Professional Development is committed to the philosophy that learning is a lifetime process and that the many years spent in formal education do not complete our learning experience. This philosophy serves as the foundation of our learning experience and values the knowledge we acquire daily and use for the rest of our lives.

Campuses offer recreation and leisure courses and activities for those who wish to enrich their cultural lives or improve their personal efficiency and professional skills. No record of previous education is necessary and little or no homework is required. No grades are given through Continuing Education, no academic credit gained and attendance standards are voluntary.

Continuing Workforce Education training courses are offered to improve employment-related skills for postlicensing and for professional licensing. Training is listed on a student's transcript. The transcript can be used in lieu of continuing education units (CEU) to show evidence of participation in professional development to employers, and licensing or certification agencies (see

below). For additional information, contact the campus Continuing Education department.

The Adult Education program offers students the opportunity to learn basic skills to earn a GED or to pursue further training through the College's vocational programs.

The College offers courses both on and off campus to meet the needs of the community, and makes every effort to begin a course when an adequate number of people request it.

Continuing Education Units (CEU)

Miami Dade provides students with the opportunity to obtain continuing education units (CEUs) for certain non-credit courses. The CEU program encourages long-range education goals and lifelong learning, and permits adult students to aggregate a number of continuing education courses to meet their personal needs.

The CEU is used as the basic means for recognizing an individual's participation in, and for recording an institution's offering of continuing workforce education courses. A CEU is defined as 10 contact hours of participation in an organized, continuing education experience under responsible sponsorship, capable direction and qualified instruction. Transcripts indicating completion of continuing workforce education courses designated for CEUs will be provided.

Contract Training for Business and Industry

Through the School of Continuing Education and Professional Development, business, industry and government can benefit from workshops and courses offered at the job site or at any of our campuses. These contract training programs are designed to meet the educational and training needs of community businesses and organizations by reaching beyond traditional academic curriculum and offering courses and workshops that focus on practical application. Offered in credit and noncredit formats, these programs are available at times and locations convenient to the participants.

Program topics include computers, management, customer service, communications, foreign languages and English as a Second Language, business English, writing and math and many others. All programs may be customized to the specific needs of the client, with job-related materials included in the curriculum.

Cooperative Education

Cooperative Education provides an opportunity for students to obtain career-related work experience and academic credit for such work. It enables students to apply classroom theory to actual work situations. In many instances, it helps students earn needed cash to meet education costs. It gives students work experience

that employers look for and it may turn into permanent employment.

Job opportunities are available in many career fields. Transfer students may continue their Cooperative Education program at many four-year colleges and universities. While enrolled at MDC, this work experience may be part time or full time, paid or voluntary, and may continue for one or two terms. The program is flexible and tailored to meet student and employer needs. The volunteer plan provides for one term of six hours or more per week for 12 weeks minimum, and for 10 hours or more per week for 12 weeks during a second term.

Through Cooperative Education, students may earn three elective credits per term for two terms. Application for the program should be made to the Cooperative Education liaison at each campus discipline. A minimum GPA of 2.0 is required.

Earth Ethics Institute

(Collegewide; Located on Wolfson Campus)

Earth Ethics Institute (EEI) is an Earth Literacy and sustainability academic initiative at Miami Dade College (MDC) offering workshops, conferences, courses, and support for MDC administrators, faculty, staff and students as well as the greater South Florida community.

The mission of the Earth Ethics Institute is to foster Earth Literacy in the course objectives of each discipline and all campus operations at Miami Dade College, as well as in the South Florida Community and the extended Earth community beyond. Earth Literacy includes an understanding of cosmology and ecological principles as the basis for sustainable living. The cosmological context is the story of the universe, as contemporary science describes the developmental process out of which Earth and all life emerge.

The Global Sustainability and Earth Literacy Studies (GSELS) Learning Network is EEI's most recent initiative. GSELS provides inclusive educational opportunities for the Miami Dade College community to explore global citizenship, ecological sustainability, and civic engagement, through understanding planetary challenges and limits and by developing values, skills, and behaviors that promote prosperity and communities of well-being. In addition, the GSELS project is replicable, requires very little funding, and hopes to serve as a national model of best practices.

GSELS acknowledges the interconnections and interdependence of the personal, social, economic, cultural, environmental, and political aspects of our world. Collaboratively, students, faculty, administrators, and staff explore the significance of human activity within an evolving Universe and Earth. Through shared leadership, this nurturing learning community facilitates the emergence of awareness, knowledge, skills and solutions

necessary to create sustainable systems that support a healthy and just economy, society, culture and environment, while fostering values of Earth ethics, social justice, cultural diversity, and civic engagement.

GSELS draws on several international documents, including the four pillars of life-long learning detailed by UNESCO, The Earth Charter, and Thomas Berry's "12 Principles of Understanding the Universe and the Role of the Human in the Universe Process." Additionally, GSELS is grounded in the principles of ecology, and environmental, sustainability and global education concepts. GSELS course criteria provide the basics to acquire the knowledge and skills needed to cope and constructively engage with the 21st century, including these eight guiding principles of global citizenship (from a consensus of experts in nine countries, East and West, as cited in Sustainable Education by Stephen Sterling):

1. looking at problems in a global context
2. working cooperatively and responsibly
3. accepting cultural differences
4. thinking in a critical and systemic way
5. solving conflicts non-violently
6. changing lifestyles to protect the environment
7. defending human rights
8. participating in the political process

EEI Programs for Faculty and Staff

GLOBAL SUSTAINABILITY AND EARTH LITERACY STUDIES

Earth Ethics Institute grew out of two earlier Miami Dade College programs, Life Lab and the Environmental Demonstration Center. It now offers a series of professional development workshops and programs for Miami Dade College administrators, faculty and staff interested in infusing ecological concepts and a cosmological context into their professions. Through Earth Literacy, one deepens his or her understanding of the interdependent human-Earth relationship and thus broadens the sense of responsibility inherent in the practice of every profession and vocation. Hundreds of MDC faculty and staff have participated in EEI workshops, featuring topics such as incorporating sustainability in existing and new curriculum, biophilia, culture and cosmology, ethics, technology and sustainability, and regenerative, interactive and sustainable design. MDC administrators, faculty and staff are also invited to participate in immersion field trips to explore the unique ecology and hydrology of South Florida. The Institute also collaborates with Genesis Farm in New Jersey, Narrow Ridge Earth Literacy Center in Tennessee, St. Thomas University and Florida International University in Miami offering courses in Earth Literacy.

Earth Ethic Institute certifies faculty who wish to participate in the GSELS Learning Network. Miami Dade College faculty, who currently hold a Master's Degree and have taken an EEI professional development work-

shop or course are encouraged to participate and begin exploring GSELS in their courses. Faculty who currently hold a Master's Degree can become GSELS-certified faculty in one of four ways:

1. 36 EEI CTD Professional Development hours
2. 3 Graduate Credits (one course) in Earth Literacy or Sustainability Leadership/Sustainable Education Studies

Environmental Center (Kendall Campus)

The Environmental Center provides noncredit courses to children and adult community members and to our work force. Enrollment is open to everyone, and there are no prior education levels, transcripts or tests required. Most classes meet weekends or evenings and are scheduled on and off campus for convenient access. The Center has many programs:

1. Landscape/gardening/home improvement courses encourage the public to utilize environmentally appropriate landscape materials and to maintain their home and landscape in ways that minimize environmental impact. Short-term training certification preparation and opportunities to participate in segments of credit courses improve the skill of landscape professionals.
2. Hands-on, interactive environmental education field trip programs are available for school groups, Kindergarten - grade 9.
3. Nature-based teacher-planning day/holiday camps serve the needs of working parents while sensitizing children in pre-kindergarten through seventh grade to the natural world. Children participate in nature games, crafts, outdoor activities and cooperative games.
4. Scout Days provide Boy and Girl Scout groups opportunities to participate in nature-based activities designed to meet badge requirements as well as to implement Eagle Scout and Gold Award projects.

Field trips, day camps and scout days are held at our Environmental Center, which includes a pine rockland, a lake, a floating dock, chickee huts, butterfly gardens, a butterfly house, organic vegetable sand gardens, a composting demonstration exhibit and an Everglades waterflow demonstration exhibit.

The Center also offers courses on the use of natural/alternative healing methods, skills for life change and courses in nontraditional spirituality. Initiatives include Native American cultural programs, expanded pine rockland research, development of community service project opportunities for high school students, weekend recreational and educational programs for adults and families.

The Center @ MDC (Wolfson Campus)

The Center @ MDC is a cultural and academic initiative that promotes reading, writing and theater throughout the year by consistently presenting high-quality literary activities open to all in South Florida.

Housed at the Wolfson Campus, The Center serves MDC and K-12 students, as well as the larger South Florida community. Center programs include many reading and writing initiatives, in addition to the prominent Teatro Prometeo, a community theater, and Miami Book Fair International, the largest literary gathering in the U.S.

Center initiatives:

- Visiting Writers participate in readings, teach workshops and conduct residencies that help students and others to deepen their understanding of literature and sharpen their creative writing abilities.
- The Center's reading campaigns for children, students and adults include The Big Read (a national program funded by the National Endowment for the Arts), One Picture Book, One Community and Story Time! All encourage an appreciation for books, while enhancing the reading and comprehension skills of people of all ages. Within the College, Current Voices in Literature provides thousands of free books every year, along with supporting materials, to students in various disciplines.
- Noncredit Creative Writing Courses are offered throughout the year, giving aspiring writers the opportunity to receive critique and encouragement from published authors with extensive teaching experience. The twice-yearly Miami Writers Institute is a conference that features workshops with bestselling and award-winning authors and publishing professionals.
- The Miami Writers Institute is a twice-yearly conference for writers featuring three and four days of intensive workshops with bestselling and award-winning authors and publishing professionals.
- The Center's Miami: City of Refuge program provides a safe haven for writers persecuted or threatened with imprisonment or death in their home countries.
- The 28-year-old Miami Book Fair International is the largest and finest literary gathering in the U.S. Over eight days in November, more than 400 authors from all over the world present books, and dozens of events and activities celebrate literature and encourage literacy. The Book Fair features a country each year, organizing symposia and festivities that promote cultural understanding.
- Teatro Prometeo is a community theater with the mission of preserving the Spanish language and Hispanic culture. It offers a conservatory-style program that features a rigorous, well-rounded curriculum of study. Prometeo presents full productions and

dramatic readings throughout the year. Courses and workshops are offered year-round.

Creative Writing Workshops

Creative writing workshops offer writers in our community a chance to share their work with a supportive, yet critical community of writers whose goal is continual development. All workshops are noncredit and open to everyone in the community.

Twice a year, the Center's Writers Institute offers four days of intensive workshops on poetry, fiction, nonfiction, publishing and more. These are complemented by readings and festive gatherings.

Literacy Initiatives

The Center's literacy-based initiatives include One Book, One Community; One Picture Book, One Community; First Readers; El Club de Lectores; and The Big Read, a nationwide reading initiative funded by the National Endowment for the Arts in partnership with Arts Midwest and the Institute of Museum and Library Services. They encourage an appreciation for books with the goal of fostering dialogue in the community and enhancing the reading skills of children and adults.

Miami Book Fair

The acclaimed Miami Book Fair, the nation's finest and largest literary gathering for more than three decades, held in November to MDC's Wolfson Campus in downtown Miami.

Attended by more than 200,000 people over eight days, Miami Book Fair features more than 600 authors and poets from around the world with readings from new works in English, Spanish and Kreyol and panel discussions on many topics. Other highlights include author readings, storytelling, and interactive experiences for children and teens, as well as panels on comics and graphic novels.

Founded in 1984 by Miami Dade College and partners, Miami Book Fair engages the community through inclusive, accessible programs that promote reading and support writers year-round. The annual eight-day festival has grown into the largest and most comprehensive community-rooted literary gathering in the United States generating discourse on contemporary literature and current issues of international importance.

Funeral Service Education (North Campus)

The Funeral Service Education program was the first public community college program in the southeastern United States to offer a degree in funeral service education. The school has embalming and restorative arts laboratories enabling students to do all training on campus.

An on-campus chapel gives students a unique opportunity to work in all aspects of funeral preparation, including embalming, dressing, cosmeticizing and casketing decedents for viewing and final services. The Funeral Services Education degree program at Miami Dade College is accredited by the American Board of Funeral Service Education Inc. (ABFSE), 992 Mantua Pike, Suite 108, Woodbury Heights, NJ 08097 (816) 233-3747. Web: <http://www.abfse.org>.

The Funeral Service Education Program requires a separate application to be admitted to the program. Miami Dade College requires that students register for the National Board Exam as administered by the International Conference of Funeral Service Examining Boards in order to graduate with the Associate in Sciences degree in their final semester. The program also offers a college credit certificate to obtain licensure as a funeral director only in the State of Florida. This academic program is designed to meet specific state or professional needs. It is not accredited by the American Board of Funeral Service Education. Students graduating from this program are not eligible to take the National Board Examination or any state board examination for which graduation from an ABFSE accredited program is required.

National Board Examination pass rates, graduation rates, and employment rates for this and other ABFSE accredited programs are available at www.abfse.org. To request a printed copy of this program's rates, go to the Funeral Service Education Office (Building 3142) by e-mail at funeralservices@mdc.edu, or by telephone 305-237-1244. The annual passage rate of first time takers on the National Board Exam (NBE) for the most recent three year period for this institution and all ABFSE accredited funeral service education programs is posted on the ABFSE website (www.abfse.org).

Funeral service graduates from MDC are qualified to practice in most states provided they have met the requirements for licensure in the given state of choice. The school provides continuing education required for license renewal of Florida funeral directors, embalmers and direct disposers, and conducts special seminars for the enrichment of funeral services personnel.

The Honors College

The Honors College is a collegewide community of student and faculty scholars who collaborate in an intellectually stimulating, enriching, challenging and supportive environment. Housed at Wolfson, North, Kendall and Eduardo J. Padrón campuses, The Honors College provides an academically rich curriculum with special scholarship, and social and service opportunities. The Honors College encourages critical thinking and intellectual curiosity in an array of programs and disciplines. The Eduardo J. Padrón Campus offers the Honors Dual Language Program, which mirrors the rigorous curriculum of the other campuses. This program offers courses

in English or Spanish for students who demonstrate mastery of both languages. Students study in small class settings and work closely with Honors faculty. The Honors College expects its students to take advantage of the many enrichment opportunities provided. These include cultural and community activities, leadership development programs, internships, national tours, study abroad programs and colloquia.

Students receive personalized guidance in preparing applications for competitive scholarship awards and transfer admission to prestigious private and public universities. In addition, The Honors College offers exemplary models of learning, an impressive speakers series, discipline-specific honors seminars and student forums. Components of the program include:

1. Merit scholarships for superior students, including The Honors College Fellows award for students who meet The Honors College eligibility criteria;
2. Opportunities to attend an array of cultural events featuring the performing and visual arts;
3. Attendance and participation of students and faculty at the annual meetings of the National Collegiate Honors Council, as well as the Regional and Florida Collegiate Honors Council meetings;
4. Transfer admission and scholarship opportunities by upper-division colleges and universities awarded to graduates of The Honors College;
5. Membership in campus chapters of Phi Theta Kappa International Honor Society for students with a GPA of 3.5 or higher;
6. Opportunities to participate in international study experiences and internships abroad;
7. Recognition as a graduate of The Honors College at commencement and designation on transcript and diploma with 36 credits in honors courses and a 3.5 GPA or higher;
8. Internships and Service Learning opportunities provided in related fields of study.

Additionally, the Honors Dual Language program offers:

1. A global perspective in all classes
2. Proficiency in two languages
3. Requirement of a global experience as an exchange student or intern.

All of the activities associated with The Honors College are designed to inspire and challenge students in their studies and to provide support and encouragement in their quest for knowledge. Students should contact the Dean of The Honors College or the Honors Director on the corresponding campus for specific information. Students may also visit the website for additional information at www.mdc.edu/honorscollege.

MEED Program

The MEED Program (Model for Enhanced Employment Development) has served students with disabilities in

Miami-Dade County with distinction for more than 20 years and has received a congratulatory Proclamation from the Office of the Mayor saluting its success. The Program has been redesigned as a national model in employability training, enhanced with the development of digital technology skills and achievement of excellence in professional skills.

The MEED Program's goal is to open doors to competitive employment opportunities. There are three distinct elements of the Program which include (1) employment assistance; e.g., effective résumé development, strategic job searching, defining accommodative needs in the workplace, etc., (2) employment development; e.g., working with business and industry and agencies throughout the County to expand inclusive employment opportunities, and (3) The MEED Academy; which features the MEED Digital Tech Studio and a Professional Studies Institute (featuring workshops and seminars in the study of employability and professional qualities and skills). Students are issued digital equipment and software that enhances accessible learning and work experiences as they participate in internships that provide application of technology and polish professional skills. The length of the Academy Program depends upon the needs of the individual student.

To learn more about the MEED Program, students are invited to call 305-237-3997.

New World School of the Arts (Wolfson Campus)

New World School of the Arts is a comprehensive college program and full-time high school preparing students for professional careers in dance, music, theater and the visual arts. The program, created by the Florida Legislature in 1984 as a Center of Excellence in the Arts, is an educational partnership of the University of Florida, Miami Dade College and Miami-Dade County Public Schools. Through its sponsoring institutions, New World School of the Arts awards the Bachelor of Music, Bachelor of Fine Arts degrees and Associate in Arts, as well as high school diplomas. Students are admitted on the basis of talent and commitment as demonstrated through audition or portfolio presentation. The school is located at Wolfson Campus in downtown Miami.

Outreach Program

The College endeavors to provide college credit and noncredit classes to residents of Miami-Dade County who find it more convenient to attend a neighborhood center than to travel to a campus. These courses are fully accredited and follow the same curriculum as on-campus courses. Classes are held in community schools, businesses, municipal agencies and other close-to-home locations. The smaller classes provide opportunities for

increased interaction with instructors. Students who attend outreach classes also find a strong network of support from fellow classmates.

Reserve Officers Training Corps

Miami Dade College, in cooperation with the University of Miami and Florida International University, permits students to enroll in Air Force ROTC (through the University of Miami) and Army ROTC (through Florida International University). An application for admission to the ROTC program, including eligibility information for new and currently enrolled students, may be obtained from the ROTC offices at the University of Miami or Florida International University. MDC credit is awarded for successful completion of ROTC courses. For further information, see “Military Science” in the Course Description section.

Servicemembers' Opportunity College

In 1972, a nationwide program sponsored by the U.S. Department of Defense and the American Association of Community Colleges designated MDC a Servicemembers' Opportunity College (SOC). The designation was awarded in recognition of the College's commitment to providing programs and special services to meet the unique educational needs of active duty service personnel.

As a SOC consortium institution, academic residency requirements for graduation purposes is limited to no more than 25 percent of the undergraduate degree program.

For further information concerning SOC services please visit the web at https://www.goarmyed.com/public/public_earn_degree-soc_army_degrees.aspx.

In addition, service personnel and their dependents may meet the College's graduation requirements by completing six credits of the last 30 credits applied to a degree at MDC.

MDC Online

MDC Online has provided award winning online credit courses to students since 1999. The online courses and programs offered by MDC Online are an excellent alternative to classroom-based instruction for the students of Miami Dade College. We take pride in a diverse community of engaged, mature students.

Our online courses use a learning management system (LMS) called Blackboard Learn and the internet to deliver instruction and to support class work. Our courses use the latest interactive technology, and provide forums for group study and support. While online courses do not require time on campus, the courses are equivalent to face-to-face courses, meeting the same competencies and learning outcomes. Students can take one course or pursue an entire two-year or four-year degree through MDC Online. MDC Online's course offerings and degree

programs allow you to maintain your personal and career schedule while earning the same regionally accredited degree that a student at our MDC campuses are awarded.

At MDC Online, a staff of technical and functional professionals supports the development of new online courses, the teaching of existing online courses, the students in online courses, and the technology used in these courses.

Earn a Degree on Your Time, Online!

MDC Online courses and degree programs were created by making the MDC student's online learning experience our top priority – offering convenience, flexibility and support. These high-quality online courses and degree programs are designed to match workforce needs to ensure that our graduates acquire the knowledge, skills and credentials for a best-fit job.

Online Program Standards

MDC Online subscribing to the following best practice distance learning tenants as prescribed in the following publications:

- Distance and Correspondence Education Policy Statement, Southern Association of Colleges and Schools Commission on Colleges (SACS)
- Principles of Good Practice-The Foundation for Quality of Southern Regional Education Board's Electronic Campus
- Five Pillars of Quality Online Education, Online Learning Consortium
- The Quality Matters Higher Education Rubric, Fifth Edition, 2014
- MDC Online is an active member of the Florida Virtual College

For more information and assistance, please contact: MDC Online - Student Support Center @ 305-237-3800 or Email Us @ online@mdc.edu

Weekend College

Weekend College is designed for students unable to attend weekday or evening classes, but it is not restricted to these individuals; students wishing to complement their schedules with additional courses are encouraged to enroll. Weekend College offers a selection of core, distribution and elective credit courses to satisfy degree and certification program requirements.

Wellness Center

(North, Kendall and Wolfson Campuses)

The College has several Wellness Centers, located on the North, Kendall and Wolfson campuses. These programs are designed to meet the wellness needs of faculty/staff, students and the community. The centers have the capability to perform a complete health/fitness assessment, including sub-maximal cardiovascular, blood pressure measurement, body composition, muscular strength and flexibility. Each

center also has a variety of cardiovascular and strength training equipment as well as an array of free-weights.

Study Abroad Programs

Miami Dade College is a member institution of the College Consortium for International Studies (CCIS). A cooperative consortium arrangement affords reciprocal access for MDC students to participate in study abroad programs offered by other member institutions and earn college credit. The CCIS is a nationwide partnership of more than 100 membership colleges and universities worldwide, including two- and four-year, public and private. This partnership offers American undergraduates a choice of more than 100 study-abroad programs in more than 27 countries. CCIS offers semester and summer programs. MDC students benefit from other institutional partnerships the college has with international organizations, such as CIEE, that sponsor events and scholarships for our students.

Miami Dade College also offers faculty-led short-term study abroad programs in numerous disciplines to various countries around the globe. Program offerings vary yearly. Traditionally, MDC faculty have led programs in the following disciplines:

- Anatomy & Physiology
- Anthropology
- Art & Humanities
- Culinary Sciences
- Environmental Sciences
- Graphic Design
- Literature
- Multicultural Communications & Relations
- Spanish Literature
- World Languages

Participation is not automatic. Students must apply through the MDC Office of International Education located at the Wolfson Campus. Most programs require a minimum 2.5 GPA. No previous study or knowledge of another language is required for most programs. If a student is eligible for financial aid, this aid may be used for study abroad. After acceptance to a program, the restricted registration for courses abroad is completed with the assistance and authorization of the Office of International Education. Some programs offer a “home-stay” option (living with a local family or individual), which accelerates language acquisition and provides in-depth knowledge of the host culture. Course content is usually country-based and many courses are fully compatible with the MDC curriculum. Course descriptions and information on the classes offered in each program are detailed during the application process. For more information about the study abroad programs, please visit www.mdc.edu/studyabroad.

Time-Saving Degree Opportunities

Miami Dade College encourages students to accelerate their education by providing time-saving programs to shorten the time necessary to complete an Associate degree. The articulated acceleration mechanism includes dual enrollment, early admission, advanced placement, credit-by-examination and the International Baccalaureate Program among others. These accelerated options can save a student valuable time and money because they provide an alternative way of earning credit at MDC and the opportunity to earn a degree more quickly.

Prior Learning Assessment (PLA)

Save money by earning credits for the things you already know. Through military or corporate training, previous learning, or even volunteer experiences, you may already have the knowledge you need to get ahead. Through PLA opportunities, you can prove that knowledge and fulfill the requirements of your degree program. In short, PLA is the evaluation and assessment of an individual's life learning for college credit, certification, or advanced standing toward further education or training.

Competency Based Education Programs

MDC Accelerate competency-based education (CBE) programs are designed in an accelerated and flexible online format for working professionals. Each program was designed with input from industry advisors. While enrolled in the program, students will have opportunities to network with business leaders.

How Does It Work? The first step is to submit an application for admission. After taking the CBE readiness assessment and meeting with a department chair or advisor, the next step is to register for a CBE program. Once in the program, students complete online performance assessments to demonstrate competency. By demonstrating competency, a student sets his or her own pace through the course. MDC Accelerate allows students to spend more time with the material they need and less time with the material they already know. To get started, apply to MDC and register for your CBE program of interest.

Foreign-Trained Professionals Program

Let your foreign professional experience work for you. With a longstanding commitment to serving multiple and diverse communities, Miami Dade College (MDC) has initiated the Foreign-Trained Professionals Program (FTP). Designed to assist foreign nationals, as well as U.S. nationals with foreign credentials, FTP helps Foreign-Trained professionals obtain the necessary U.S. credentials to continue their careers. Courses and programs are offered on campuses and online.

Benefits of Foreign-Trained Professionals Program (FTP):

- Evaluation of foreign credentials
- College credit awarded for applicable foreign work experience
- Earn an MDC certificate or degree
- Quick return to your career of choice

Dual Enrollment and Early Admission

(See Special Admissions Categories)

The Dual Enrollment program allows high school students (or home education students) to earn college credit and credit toward a high school diploma simultaneously. The college credit may be applied toward a postsecondary diploma, or a certificate or degree at a Florida public institution. The Dual Enrollment program is an opportunity to take challenging courses and accelerate education opportunities. Students who successfully complete dual enrollment courses will save time in obtaining their college degree, and save money as well, because these students are exempt from the payment of registration, tuition and laboratory fees.

To enroll in courses through the dual enrollment program, students must demonstrate readiness for college-level coursework. Eligibility criteria take both GPA and passing the appropriate sections of the college placement test into consideration. The high school must grant permission for the student to enroll in these courses, thereby agreeing to accept these college courses to meet high school graduation requirements.

Early admission is a form of dual enrollment through which eligible high school students enroll at the college on a full-time basis. The courses these students take are creditable toward a high school diploma and the certificate or associate degree. Students selected for early admission or dual enrollment may begin their studies in any term, provided that they complete the regular admission, advisement and registration procedures and receive permission from their high school.

Alternative Ways of Earning Credit Through Standardized Examinations

- Advanced Placement (AP)
- Cambridge Advanced International Certificate of Education Examination (AICE)
- Caribbean Advanced Proficiency Examination (CAPE)
- Certified Professional Secretary Examination (CPS)
- College-Level Examination Program (CLEP)
- DANTES Subject Standardized Tests (DSSTs)
- Defense Language Proficiency Test (DLPT)
- Excelsior College Examinations (formerly Regents or ACTPEP)
- International Baccalaureate (IB)
- UExcel

Miami Dade College awards college credit for standardized examinations that document the required

knowledge and competencies for one or more subject areas. Evaluations of examinations are made after the student has been admitted to the College. Official score reports must be sent directly from the testing agencies to the College's Transcript Processing Services Office. Awarded credit based on the College's approved course equivalents will appear on the student's permanent record and on the student's official College transcript as earned credit only. There will be no indication of grades or quality points and duplicate credit is not awarded (State Rule 6A-10.024 (8)). Miami Dade College uses the minimum scores, credits and guidelines for awarding credit for exams established by the State of Florida's Articulation Coordinating Committee (ACC). For additional information please visit the Testing Criteria Credit-by-Exam website, accessed from MDC's Homepage (www.mdc.edu) by clicking on Admissions', then 'Testing Information'.

Institutional (Departmental) Credit-by-Examination

Students who have been admitted to the College may receive credit for courses through departmental examinations. Applications for this type of credit are available from the Registrar's Office and must be approved first by the appropriate academic department. Subsequently, the registration must be completed at the Registrar's Office and fees need to be paid by each term's published deadline. Credits for departmental examination are not included in any computation of credit load for full-time or part-time student status. Institutional credit-by-examination will become a part of the student's permanent record at the conclusion of the term in which it is awarded. Grades of A, B, C or D will be assigned for college credits earned by examination and will be computed in the student's GPA. A nonrefundable fee of \$30 per credit will be charged for each examination administered.

Credit for Specialized Training

College credit for specialized non-collegiate occupational training may be granted to students enrolled in occupational programs. This credit is granted upon validation of the non-collegiate instruction by the appropriate academic department. A processing fee of \$15 per course, up to a maximum of \$50 for any single application, will be charged for the evaluation of non-collegiate instruction. Agreements to recognize specialized non-collegiate occupational training must have been previously approved in accordance with College curriculum procedures.

Certified Professional Secretary (CPS)

Students passing the complete national examination of the Certified Professional Secretary Examination (CPS) and the CPS Exam Prep courses may be granted

credit toward an Office Administration Associate in Science degree at Miami Dade after official score reports are received from the International Association of Administrative Professionals (IAAP). The credit will appear on the student's permanent record as earned credit only, without any indication of grades.

Industry Certifications

Miami Dade College may award college credit to eligible students who have earned a recognized appropriate industry certification which will be applied toward the specific Associate in Science degree.

Evaluations of industry certification(s) are made after the student has been admitted to the College and provides a valid industry certification based on the SBOE, which has approved a statewide list on industry certification. For a complete list of the approved statewide Career and Technical Education articulation agreements please visit the Prior Learning Assessment Certification Process Web site, accessed from www.mdc.edu/PLA, then clicking on Earning College Credits, and then 'Certification process'.

Military Service Schools, Defense Activity for Non-Traditional Education Support (DANTES) and United States Armed Forces Institute (USAFI)

Miami Dade College will grant credit toward an Associate degree for properly validated military service training. This includes military service schools, the United States Armed Forces Institute (USAFI) and Defense Activity for Non-Traditional Education Support (DANTES) end-of-course examinations, as well as acceptable College Level Examination Program (CLEP) test scores. The recommendation of the American Council on Education, a guide to the evaluation of education experiences in the armed services, is used in evaluating military service school training. Active duty military personnel must submit DD Form 295 and the Miami Dade military service school training record form. USAFI and DANTES college-level credit courses taken by correspondence, or by extension through other accredited colleges, are accepted under regular transfer credit provisions. Official Reports of Educational Achievement must be mailed directly to the College Admissions Department from each approved organization.

College credit earned through military service schools, USAFI, or DANTES college level end of course tests, will appear on the student's permanent record as earned credit only, without any indication of quality points. Transfer credit evaluations of this work are made after the student has been admitted to the College. Veterans must submit a true copy of the service personnel's separation papers (DD Form 214) and the Miami Dade military service school training record form to the Admissions Office.

Veterans who have earned credit through USAFI or DANTES should request transcripts from Educational Testing Service. Prospective students may contact: Representative for DANTES, P.O. Box 6604, Princeton, New Jersey 08541.

SPECIAL INFORMATION

Computer Services

Miami Dade College provides students and faculty with a state-of-the-art computing and telecommunication infrastructure. The College's campuses and centers are interconnected by a highspeed gigabit fiber net work backbone supporting voice, video and data. The network currently provides 10Gbps bandwidth connection to the Internet from diverse sites using multiple service providers. Wireless connectivity for mobile computing is available in classrooms, libraries, conference centers, and outdoor locations. All classrooms are augmented with a variety of technological tools including computers and digital projectors that can enhance the learning experience. In addition to extensive computing facilities at each College location, the College also offers a wide array of online services for students. The MyMDC student portal and mobile app allow students to manage their college experience via web or mobile phone. The portal and mobile app provide self-services in admissions, orientation, registration, advising, financial aid, transcript requests, term grades, credit card payments, and many more. The Blackboard Learning Management System facilitates the creation and delivery of online instructions.

Institutional Advancement (District Office)

The College secures essential support for student scholarships, STEM education, arts and culture, entrepreneurship, workforce training, and other programs and projects through the Miami Dade College Resource Development Department, the Office of Alumni Relations, and the Miami Dade College Foundation, Inc.

Resource Development Department

The Resource Development Department identifies external sources of grant funding to support the programs and priorities of the College. The department works with College faculty, staff, and leadership to develop, prepare, and submit innovative grant proposals to public and

private funding sources designed to promote excellence in teaching, learning, and institutional effectiveness. Resources obtained through grant awards help fund new and existing programs, special projects, student services, curriculum development, professional staff development, the construction of new facilities, exchange programs, research, new equipment, and student scholarships. The Resource Development Department also encourages public-private partnerships, and collaboration with industry, community-based organizations, and other educational institutions. In addition to handling all pre-award processes for the College, the department serves as the sponsored programs entity, with all grant applications going through it for approval of the College's authorized organizational representative and College Board of Trustees.

Miami Dade College Office of Alumni Relations

The Office of Alumni Relations advances the goals, objectives and priorities of Miami Dade College by generating private financial support, building and maintaining relationships with alumni and donors, and engaging alumni and students to foster a lifelong intellectual and emotional connection between MDC and its graduates.

Alumni are vital to the long-term success of Miami Dade College and supporting its strategic goals. With the Miami Dade College Foundation, the Office of Alumni Relations fosters and cultivates a common bond of pride, affinity and connectivity among alumni, students, prospective students and friends of the College through quality programs, services, events and programmatic initiatives.

Miami Dade College Foundation Inc.

Miami Dade College Foundation was chartered by the state of Florida in 1965 as a nonprofit 501(c)3 direct support organization of Miami Dade College. Governed and guided by an independent Board of Directors of more than a dozen community leaders, the Foundation raises awareness and financial resources for Miami Dade College to maintain open-door access to anyone who seeks an education, and to provide innovative and multicultural academic and cultural programs, all of which contribute to the vitality of our community.

The Foundation ensures the mission of Miami Dade College is accomplished by pursuing funding opportunities that support MDC's 2015-2020 Strategic Plan priorities:

- Students Access and Success
- Educational Quality
- institutional Agility

As state support for higher education continues to decline, the Foundation's efforts to identify alternative funding sources are vital to the future of MDC. The Foundation manages relationships with and seeks funding opportunities from individuals, private and family

foundations, civic organizations and corporations. Gifts from these sources have established and continue to support scholarships, new programs, direct faculty support and critical capital improvement funds.

Contributions to the Foundation are tax deductible under Section 170 of the Internal Revenue Code and are administered according to gift agreements and donor intentions. Numerous donations from many generous sources have contributed to the growth of the Foundation's endowment, which is approximately \$132 million. The endowment is comprised of more than 1,000 scholarship and program support donor accounts that directly benefit the College.

Endowed Teaching Chairs

The Miami Dade College Endowed Teaching Chair program is the first of its kind at a community college dedicated solely to recognizing excellence in teaching. Inaugurated in 1992, the Endowed Teaching Chair awards each recipient \$22,500 over three years, allowing faculty to explore new teaching methods, develop new projects, purchase specialized or innovative teaching materials, enhance their technological expertise and further their own knowledge for the benefit of students.

The Endowed Teaching Chairs represent our institution's highest recognition of our faculty. Recipients of this award, past and present, have demonstrated to their peers the absolute definition of excellence in every aspect of teaching. Further, they have made student learning their top priority and, in doing so, help fulfill the mission of Miami Dade College.

The Endowed Teaching Chairs have been made possible through the generous support of individuals, corporations and organizations committed to the art of teaching and are managed by the Miami Dade College Foundation. Since the program's inception in 1992, the Foundation has awarded more than 300 Endowed Teaching Chairs. A gift of an Endowed Teaching Chair is among the most important contributions that can be made to the College and the thousands who are educated at MDC.

College Credit Courses and Career Technical Courses

COLLEGE CREDIT COURSES

Accounting

ACG1403	137
ACG1949	137
ACG2001	137
ACG2001L	137
ACG2011	137
ACG2011L	137
ACG2021	137
ACG2021L	137
ACG2031	137
ACG2071	137
ACG2071L	138
ACG2100	138
ACG2170	138
ACG2360	138
ACG2450	138
ACG2500	138
ACG2630	138
ACG2949	138
ACG3103	138
ACG3113	138
ACG3343	138
ACG4632	138
TAX2000	138
TAX2002	138
TAX2010	139
TAX2021	139
TAX2401	139
TAX 4001	139
TAX 4011	139

Aeronautical Science

ASC1010	139
ASC1210	139
ASC1550	139
ASC1610	139
ASC2320	139
ASC2470	139

ASC2670	139
ATF 1100L	139
ATF1601L	140
ATF2210	140
ATF 2210L	140
ATF2305	140
ATF 2305L	140
ATF2400	140
ATF2501	140
ATF2501L	140
ATF2651C	141
ATT1100	141
ATT1101	141
ATT2110	141
ATT2120	141
ATT2131	141
ATT2133	141
ATT2660	141
ATT2820	141
ATT2821	141
ATT2822	141
ATT2823	142
AVM1010	142
AVM1022	142
AVM1062	142
AVM1121	142
AVM 1160	142
AVM 1161	142
AVM 1162	142
AVM 1163	142
AVM 1164	142
AVM1301	142
AVM1440	142
AVM1520	143
AVM1521	143
AVM1949	143
AVM2120	143
AVM2410	143
AVM2431	143
AVM2441	143
AVM2450	143
AVM2510	143
AVM2515	143
AVM2949	143

Agriculture & Related Technologies

ATE1110	143
ATE1110L	144
ATE1211	144
ATE1630	144
ATE1650L	144
ATE1940	144
ATE1941	144
ATE2050L	144
ATE2611	144
ATE2612	144
ATE2614	144
ATE2631	144
ATE2636	144
ATE2636L	145
ATE2638	145
ATE2638L	145
ATE2639	145
ATE2639L	145
ATE2652L	145
ATE2655L	145
ATE2661	145
ATE2671C	145
ATE2710	145
ATE2722C	145
ATE2942	145
ATE2943	145
HOS1010	146
HOS1011	146
IPM2112	146
IPM2301	146
IPM2635	146
LDE2000	146
LDE2310	146
ORH1251	146
ORH1510	146
ORH1511	146
ORH1840C	146
ORH2230	146
ORH2277	146
ORH2835C	147
ORH2837C	147
ORH2932	147
ORH2949	147

American Sign Language and ASL Interpretation

ASL1000	147
ASL1140C	147
ASL1150C	147
ASL1906	147
ASL2160C	147
ASL2200C	147
ASL2210	147
ASL2220	147
ASL2400	147
ASL2430	148
ASL2510	148
SPA2001	148

Anthropology

ANT2000	148
ANT2410	148
ANT2511	148

Architecture

ARC1113	148
ARC1115	148
ARC1126	148
ARC1128	148
ARC1301	148
ARC1302	148
ARC1949	148
ARC2053	149
ARC2056	149
ARC2172	149
ARC2178C	149
ARC2180C	149
ARC2201	149
ARC2303	149
ARC2304	149
ARC2312C	149
ARC2461	149
ARC2580	149
ARC2681	149
ARC2701	150
ARC2702	150
ARC2765	150
ARC2767	150

ARC2949	150
RC2171	149

Art

ARH1000	150
ARH2050	150
ARH2051	150
ARH2402	150
ARH2740	150
ARH2857	150
ART1201C	150
ART1202C	150
ART1203C	151
ART1205C	151
ART1300C	151
ART1330C	151
ART1803C	151
ART1949	151
ART2142C	151
ART2150C	151
ART2151C	151
ART2301C	151
ART2302C	151
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Statistics

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Student Life Skills

SLS1106 **300**
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SLS1130 **300**
SLS1401 **300**
SLS1502 **300**
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SLS1510 **300**

Surveying

SUR1001C **300**
SUR1101C **300**
SUR1202C **300**

Teaching English as a Second Language

TSL3080 **300**
TSL3240 **300**
TSL3243 **301**
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TSL4310 **301**
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Theater Arts

THE1925 **301**
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COLLEGE CREDIT COURSES

Miami Dade College courses are developed and offered to meet the many and varied needs of both individual students and the community. College credit courses are offered in general education, occupational/technical, nursing, allied health, business, and public service disciplines. The following are descriptions of more than 2,000 college credit courses at Miami Dade College. These Courses are applicable to the Baccalaureate, Associate of Arts, and Associate in Science, Associate of Applied Science degree programs and/or certificate programs. They are listed in alphabetical order by title according to the State Course Numbering System directory of taxonomies and are subject to change. Not all courses are offered each term or at each campus. Check the registration handbook of the campus you are attending, or plan to attend, prior to registration each term.

Accounting

ACG1403 **Excel for Business** **1.00 – 3.00 credits**

This course will cover Excel topics relevant to the field of accounting and finance including, but not limited to, VLOOKUP, HLOOKUP, INDEX, MATCH, IF, AND, OR, Pivot Tables, Named Ranges, Array Formulas, Custom Number Formats, Conditional Formatting, Absolute References and Keyboard Shortcuts.

ACG1949 **Co-op Work Experience 1** **3.00 credits**

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employee. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. (3 hr. lecture)

ACG2001 **Principles of Accounting 1** **3.00 credits**

An introduction to the basic principles of financial accounting with emphasis on basic accounting procedures such as the recording of transactions and the preparation of financial statements. Other topics include inventories, receivables, and cash. ACG 2001 and ACG 2011 can be substituted for ACG 2021. Corequisite: ACG 2001L. (3 hr. lecture)

ACG2001L **Principles of Accounting 1 Lab** **1.00 credits**

Students will use personal computer software and financial accounting applications to analyze accounting records and prepare financial statements. This course will reinforce, with tutorial help and problem-solving, the concepts needed to achieve the objectives of ACG2001. Corequisite: ACG 2001. Laboratory fee. (2 hr. lab)

ACG2011 **Principles of Accounting 2** **3.00 credits**

Accounting for owners' equity with emphasis on corporate financial statements. Other topics include plant assets, intangible assets, current and long-term liabilities. ACG 2001 and 2011 can be substituted for ACG 2021. Prerequisite: ACG 2001; corequisite: ACG 2011L. (3 hr. lecture)

ACG2011L **Principles of Accounting 2 Lab** **1.00 credits**

Students will use personal computer software and financial accounting applications to analyze accounting records, prepare financial statements, and compile EXCEL spreadsheets. This course will reinforce, with tutorial help and problem-solving, the concepts needed to achieve the objectives of ACG2011. Corequisite: ACG 2011. Laboratory fee. (2 hr. lab)

ACG2021 **Financial Accounting** **3.00 credits**

An introduction to financial accounting concepts and analysis with emphasis on

corporate financial statements and determination of income. Corequisite: ACG 2021L. (3 hr. lecture)

ACG2021L **Financial Accounting Lab** **1.00 credits**

Students will use personal computer software and financial accounting applications to analyze accounting records and prepare financial statements. This course will reinforce, with tutorial help and problem-solving, the concepts needed to achieve the objectives of ACG2021. Corequisite: ACG2021. May be repeated for credit. Laboratory fee. (2 hr. lab)

ACG2031 **Accounting Theory** **3.00 credits**

Designed primarily for the transferring accounting major, the course covers current topics in both financial and managerial accounting. It exposes the student to a computerized accounting system. It also familiarizes the student with current accounting literature and includes a review of the preparation and analysis of financial statements. Prerequisites: ACG 2071. (3 hr. lecture)

ACG2071 **Managerial Accounting** **3.00 credits**

Managerial Accounting focuses on the accounting information needs of the various levels of internal management within an organization. Internal responsibility is directed at three major areas of management responsibility: cost determination, planning and control, and long-term

COLLEGE CREDIT COURSES

decision-making. Prerequisite: ACG 2011 and ACG 2001 or ACG 2021; corequisite: ACG 2071L. (48 Contact hrs.)

ACG2071L **Managerial Accounting Lab** **1.00 credits**

Students will learn to interpret and solve problems related to the managerial accounting field. Additional support will be provided to students in order to achieve the objectives of ACG2071. Prerequisite: ACG2001, ACG2021L, ACG2021, ACG2011; corequisite: ACG2071. Laboratory fee. (2 hr. lab)

ACG2100 **Intermediate Accounting 1** **3.00 credits**

A review of the accounting cycle and advanced work in the area of temporary investments, receivables, inventories, plant assets, and investments in stock and bonds. Prerequisite: ACG 2071. Special fee. (3 hr. lecture)

ACG2170 **Financial Statement Analysis** **3.00 credits**

Basic instruction in analyzing statements in order to make sound judgments on the financial condition of specific businesses. Prerequisite: ACG 2071. Special fee. (3 hr. lecture)

ACG2360 **Cost Accounting** **3.00 credits**

A consideration of the accumulation, interpretation and control of costs by the job order and the process cost systems. Includes the study of break-even analysis, budgeting and other cost control techniques. Prerequisite: ACG 2071. Special fee. (3 hr. lecture)

ACG2450 **Microcomputers in Accounting** **1.00 - 3.00 credits**

Accounting application of electronic data processing including the preparation interpretation and use of computer information in financial decision making. Pre-

Co-requisite: ACG 2001 or ACG 2021. Special fee. (1-3 hr. lecture)

ACG2500 **Financial Management for Non-Profit Organizations** **3.00 credits**

This course provides an overview of the way in which a non-profit organization is responsible for the financial management of the organization. Success of many non-profits centers on the feasibility of the groups fiscal policies. This course provides a systematic analysis of the financial and legal ground work for which non-profit administrators, board members, and staff of non-profits are responsible. (3 hr. lecture)

ACG2630 **Auditing** **3.00 credits**

Fundamental principles of audit practice and procedure including the verification of balance sheets and income statement items, the preparation of audit working papers, and the compilation of audit reports. The course includes short problems and audit of accounting records. Prerequisite: ACG 2071. Special fee. (3 hr. lecture)

ACG2949 **Co-op Work Experience 2: ACG** **3.00 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-Operative Education Office to obtain registration approval. (3 hr. lecture)

ACG3103 **Intermediate Financial Accounting I** **3.00 credits**

Theory and methodology underlying financial reporting, including the FASB's conceptual framework, the accounting process, finan-

cial statements, accounting changes, present value applications, and current assets. Prerequisite: ACG 2071, MAC 2233, QMB 2100.

ACG3113 **Intermediate Financial Accounting II** **3.00 credits**

Continuation of ACG 3103. Particular emphasis on analysis of balance sheet accounts through problem solving. Provides students with a more in-depth knowledge of Generally Accepted Accounting Principles (GAAP), including the advance student of long-term assets, current and long-term liabilities and equities. Prerequisite: ACG 3103.

ACG3343 **Cost Accounting and Controls** **3.00 credits**

Preparation of accounting information for use in management decision making process. Contains information on budgeting, standard costing, direct costing, performance evaluation, and use of accounting information. Prerequisite: ACG 2701.

ACG4632 **Auditing** **3.00 credits**

This course provides a sound conceptual foundation of basic auditing process from the perspective of the public accounting profession. Professional standards, ethics, legal responsibilities, and utilization of technology are addressed. Principles and procedures of internal and public auditing are discussed, including professional standards, ethics, legal responsibilities, and the utilization of technology.

TAX2000 **Income Tax** **3.00 credits**

Federal income tax fundamentals with emphasis on individual returns. Topics considered include gross income, capital gains and losses, deductions and exemptions, and tax credits. Special fee. (3 hr. lecture)

TAX2002 **Taxation Practices and Procedures** **3.00 credits**

This course will cover Internal Revenue Service taxation practices and procedures.

Topics covered will convey knowledge of IRS rules and penalties, rules for representing taxpayers before the IRS and in the courts, rules and requirements associated with the tax return filing process and records maintenance rules and basic tax research skills.

TAX2010
Business Taxes & Returns
3.00 credits

A practical course on the various tax reports and forms required in an accounting office. Topics include payroll deposits, payroll returns, corporate tax return, annual report, tangible and intangible tax returns, sales taxes, employment forms and licenses. (3 hr. lecture)

TAX2021
Taxation of Business Organizations
3.00 credits

This course will cover federal income taxation of corporations, S Corporations, limited liability companies and partnerships. Topics covered include determining the tax consequences of income, expenses, distributions, redemptions and liquidations for business entities. Practical application of the tax law will be emphasized along with analysis of tax procedures.

TAX2401
Tax of Estates, Gifts and Trusts
3.00 credits

This course covers definitions and operations of various fiduciary forms of wealth transfer including but not limited to fiduciary accounting principles and concepts; record keeping requirements; and various tax reporting requirements, forms and calculations.

TAX 4001
Federal Income Tax I
3.00 credits

A survey of federal income tax with emphasis of taxation of individuals and the ethics of income tax accounting, student of the basic theory, concepts, practice and methods of determining the taxable income and tax liabilities. Prerequisite: ACG 3103

TAX 4011
Federal Income Tax 2
3.00 credits

A survey of federal income tax with emphasis of taxation of business entities and the ethics of income tax accounting, student of the basic theory, concepts, practice and methods of determining the taxable income and tax liabilities. Prerequisite: TAX 4001.

Aeronautical Science

ASC1010
Aerospace History
3.00 credits

This course is designed to provide the student with an understanding of the significant events, people, places and technologies of aviation that have occurred as it progressed through history. The course begins centuries before man flew when concepts of flight were first being imagined to the first successful hot air balloons and the first heavier than air attempts at flight and continues to the present day with supersonic aircraft and space vehicles from both a civilian and military perspective. (3 hr. lecture)

ASC1210
Aviation Meteorology
3.00 credits

This is a core aviation course. The student will be prepared to understand weather and environmental issues in commercial aviation. Topics covered will be atmospheric phenomena relating to aircraft operations, the analysis and use of weather data as presented by the U.S. National Weather Service. Prerequisite: ATT 1100 or equivalent; corequisite: ATT 2110 or equivalent. Special fee. (3 hr. lecture)

ASC1550
Aerodynamics
3.00 credits

This is a basic course in aerodynamics. Students will analyze the physics of flight and the application of basic aerodynamics to both airframe and power plant as preparation for the requirements of commercial aviation. (3 hr. lecture)

ASC1610
Aircraft Engines and Structure Theory
3.00 credits

This is a foundation course in aircraft engines and structure. Students will learn the elements of aircraft engines, engine theory, construction, systems, operating procedures, performance diagnosis, and aircraft structures. (3 hr. lecture)

ASC2320
Aviation Laws and Regulations
3.00 credits

Insight pertinent to federal governing bodies, and current local, federal and international laws forming the present structure of aviation law. (3 hr. lecture)

ASC2470
Physiology/Psychology of Flight
3.00 credits

This is an introductory course in the physiology and psychology of flight. Students will learn aero-medical facts of significance to pilots, including causes, symptoms, prevention and emergency treatment of ailments common to the aviation environment through a basic understanding of a person's normal functioning. Cabin pressurization, communications, decompression sickness, hyperventilation, hypoxia, self-imposed stresses, spatial disorientation and vision are examined. (3 hr. Lecture)

ASC2670
Aircraft Systems
3.00 credits

As preparation for commercial aviation requirements, this course is concerned with a detailed study of aircraft systems, their various sources of basic power and the functional application of mechanisms operated by these systems. Prerequisite: ASC 1610. (3 hr. lecture)

ATF 1100L
Private Pilot Flight Accelerated
3.00 credits

This course provides flight training in the areas required to safely perform the duties of a private pilot. This course is to be completed in less than 16-weeks using "total immersion" approach to training to help lower the attrition rates for students. It

fulfills the requirements for private pilot certification outlined in part 141 of the Federal Aviation Regulations as presented in the Jeppesen Sanderson Private Pilot Syllabus. Upon satisfactory completion of this course and the Federal Aviation Administration (FAA) knowledge and practical exams, the applicant will receive an FAA private pilot certificate. Prerequisites: ATT 1100; FAA first class medical certificate; Special Fee. (3 hr. lecture). Note: This course not approved for Veterans seeking to use Veterans Educational Benefits.

ATF1601L **Flight Orientation/Simulator Lab** **1.00 credits**

This course will provide the student with an introduction to the environment of operating an aircraft from a pilot's point of view. It is designed to provide this knowledge to those students such as Air Traffic Controllers and Aviation Administration Students who have no piloting experience. Special fee. (2 hr. lab)

ATF2210 **Commercial Pilot Flight** **3.00 credits**

This course provides pilot training required to allow the student to safely conduct flight as a Commercial Pilot. The training will be conducted in accordance with FAR Part 141 and in concert with stages 5 and 6 of the Jeppesen Sanderson Instrument/Commercial Syllabus. Upon satisfactory completion of this course, the FAA written exam, and FAA practical exam the student will receive an FAA Commercial Rating. Minimum approved FAA Part 141 course hours include 120 hours of flight, any additional training required beyond the FAA minimum is the financial responsibility of the student. Cost per hour Wet/Dual at Wayman Flight School Cessna 152 = \$99/\$158, Cessna 172 C = \$120/ \$179, Cessna 172 G = \$165/\$224, Cessna 172 R = \$139/\$198, Piper = \$159/\$218. Prerequisites: FAA Instrument Rating; Corequisite: ATT 2110. (3 hr. lecture)

ATF 2210L **Commercial Pilot Flight Accelerated** **3.00 credits**

This accelerated course of instruction provides training required to allow the student to safely conduct flight as a Commercial Pilot. This course is expected to be completed in less than 4-months. The training will be conducted in accordance with Codes of Federal Regulations (CFR) Part 141. This training will be completed utilizing the Jeppesen Sanderson Instrument/Commercial Syllabus. Upon satisfactory completion of this course, the FAA knowledge test, and FAA practical test the student will be awarded an FAA Commercial Pilot certificate. A 1st Class Medical Certificate with Instrument Rating are required. Minimum approved FAA CFR Part 141 course hours include 120 hours of flight. Special Fee. (3 hr. lecture)

ATF2305 **Instrument Pilot Flight** **3.00 credits**

This course provides the flight training required to safely conduct flights as an instrument rated pilot. The training is conducted in accordance with FAR Part 141 as outlined in stages 1 through 4 of the Jeppesen Sanderson Instrument/Commercial Syllabus. Upon satisfactory completion of this course and the Federal Aviation Administration (FAA) knowledge and practical exams, the applicant will receive an FAA instrument rating. Minimum approved FAA Part 141 course hours include 35 hours of flight. Cost per Hour Wet/Dual at Wayman Flight School Cessna 152 = \$99/\$158, Cessna 172 C = \$120/ \$179, Cessna 172 G = \$165/\$224, Cessna 172 R = \$139/\$198. Prerequisites: FAA Private Pilot Certificate; Corequisites: ATT 2120. (3 hr. lecture)

ATF 2305L **Instrument Pilot Flight Accelerated** **3.00 credits**

This accelerated course provides the flight training required to safely conduct flights as an instrument rated pilot. This course is to be completed in less than 16-weeks. The training is conducted in accordance with Codes of Federal Regulations (CFR) Part 141 of the Federal Aviation Regulations

as outlined in the Jeppesen Sanderson Instrument/Commercial Syllabus. Upon satisfactory completion of this course and the Federal Aviation Administration (FAA) knowledge test and practical test, the applicant will receive an FAA Instrument Rating. Minimum approved FAA CFR Part 141 course hours include 35 hours of flight. Prerequisites: FAA Private Pilot Certificate; corequisites: ATT 2120; current FAA 3rd Class Medical (1st Class preferred). Special Fee. (3 hr. lecture)

ATF2400 **Multi-Engine Pilot Flight** **1.00 credits**

This course provides the flight training required to prepare the student to safely conduct flight as a Multi-Engine Pilot. Upon satisfactory completion of this course, and the FAA oral and practical exams, the student will receive an FAA Multi-Engine Rating. Minimum approved FAA Part 141 course hours include 20 hours of flight. Cost per hour Wet/Dual at Wayman Flight School \$300/\$359. Prerequisites: FAA Private Pilot Certificate; Corequisite: ATT 2133. (1 hr. lecture)

ATF2501 **Flight Instructor-Flight Training** **3.00 credits**

This course provides flight training for the student to develop the ability to analyze the performance of private and commercial flight maneuvers from the right seat of a training aircraft, in compliance with the Federal Aviation Administration Certified Flight Instructor Certificate. Minimum approved FAA Part 141 course hours include 25 hours of flight. Cost per hour Wet/Dual at Wayman Flight School \$159/\$218. Prerequisites: FAA Commercial Certificate or ATP; Corequisite: ATT 2131. (3 hr. lecture)

ATF2501L **Flight Instructor-Laboratory** **1.00 credits**

Provides the student with internship teaching experience based upon the principles of flight instruction learned in ATT 2131 and ATF 2501. Students will learn to develop lesson plans and how to communicate effectively using instructional materi-

als Prerequisite: ATF 2300; Corequisite: ATT 2131, ATF 2501. (2 hr. Lab)

ATF2651C
Flight Engineer-Turbojet
4.00 credits

This course will provide ground and simulator training for the purpose of obtaining a turbojet flight engineer license (Boeing 727) in accordance with provisions of FAR 63.64, FAR 63 Appendix C and Exemption 4901. Each trainee must hold a valid Commercial Pilot's Certificate with an instrument rating. Each trainee must also have successfully completed the FAA Flight Engineer Written Exam in accordance with FAR 63.35(d). (3 hr. lecture; 2 hr. lab)

ATT1100
Private Pilot Theory
3.00 credits

This course introduces basic subjects pertaining to pilot knowledge including: basic aircraft systems, aircraft operation and performance, aerodynamic principles, human factors, and aeronautical decision making. When this course is taken concurrently with ATT 1101, it will prepare students for the FAA (Federal Aviation Administration) Private Pilot Knowledge Examination and allow them to take the FAA exam (IAP047) upon completion of the course. This course meets the requirements of FAR part 141 for a ground school for the FAA Private Pilot Certificate. Corequisite: ASC 1210 (3 hr. lecture)

ATT1101
Private Pilot Applications
3.00 credits

This course, together with ATT 1100, provides the basic knowledge needed by students in the Professional Piloting Technology program. The two courses must be taken concurrently by students majoring in the professional Piloting Technology program. The areas of study include: aircraft preflight, the planning and preparations prior to flight, airport operations, airspace, Federal Aviation Regulations, flight information publications, air navigation, cross country navigation, radio navigation, and flight safety. When this course is taken simultaneously with ATT 1100, it will pre-

pare students for the FAA (Federal Aviation Administration) Private Pilot Knowledge Examination and allow them to take the FAA exam (IAP047) upon completion of the course. Corequisites: ATT 1100, ASC 1210. (3 hr. lecture)

ATT2110
Commercial Pilot Theory 3
3.00 credits

This course provides students with the aeronautical knowledge required to act as Commercial Pilot. Students will prepare for the FAA Commercial Written Exam. Private Pilot Certificate with Instrument Rating required. Prerequisite: ATF 2200. Corequisite: ATF 2300 or 2210. (3 hr. lecture)

ATT2120
Instruments Pilot Theory
4.00 credits

This course introduces basic theories of instrument pilot operations to prepare students for the FAA Instrument Written Exam. Students will acquire aeronautical knowledge required to act as an Instrument rated Pilot. It will prepare the students for the FAA Instrument Written Exam. Private Pilot Certificate required. Prerequisites: ASC 1210, ATF 1100, ATT 1100; corequisite: ATF 2200. (4 hr. lecture)

ATT2131
Flight Instructor Theory
3.00 credits

Provides the student ground instruction to obtain the necessary aeronautical knowledge, to meet the FAA written standards for the Certified Flight Instructors Certificate. Preparation for the written exam is included in the course content. Prerequisite: ATF 2300; corequisites: ATF 2501, 2501L. (3 hr. lecture)

ATT2133
Multi-Engine Pilot Theory
2.00 credits

This course introduces basic theories of multi-engine pilot operations to prepare students for the FAA Multi-Engine oral and practical exams. Students will acquire aeronautical knowledge required to act as a multi-engine rated pilot. (2 hr. lecture)

ATT2660
Regional Airline Operations
3.00 credits

This course provides theoretical instruction and practical experience in flight planning inclusive of navigation, weather, fuel management, flight and communication procedures, aircraft performance, crew coordination and simulator procedures. Utilizing flight systems automated panels, the course additionally provides practical instruction in the operation of aircraft systems. Prerequisites: ASC 1610, ATT 2110, 2120. (3 hr. lecture)

ATT2820
Air Traffic Control
3.00 credits

The basic elements of air traffic control operations, providing the necessary foundation for successful completion of the Air Traffic Control Basic Certification Examination. Prerequisite: sophomore standing in major program. (3 hr. lecture)

ATT2821
Air Traffic Control (ATC) Radar
3.00 credits

This course will provide the student with a fundamental knowledge of air traffic control practices, policies and procedures as they relate to the specifics of the controller function in an air traffic radar operating environment, with air traffic controllers utilizing the radar for traffic separation. The liberal use of the figures and example phraseology assist the student in achieving an overall use of understanding of the air traffic control system. A radar air traffic control simulator is utilized to provide realistic training exercises for the students. Prerequisite: ASC1210. (2 hr. lecture; 2 hr. lab)

ATT2822
VFR Tower Operations
3.00 credits

This course expands the knowledge attained from ATT 2820, and is designed to further develop the aviation students skill in the ATC environment. Emphasis is placed on the duties and responsibilities of operational positions in local, ground, flight data, and coordination. Students will also learn the FAA regulations which govern

flight under visual conditions. Optimum use of the Hughes Virtual Tower incorporated into this course. Prerequisite: ATT 2820. Special fee. (3 hr. lecture)

ATT2823

Air Traffic Control (ATC) NON-Radar 3.00 credits

In this course, future air traffic controllers will acquire an understanding of air traffic control practices, policies and procedures and their application in a non-radar air traffic environment. Throughout this course, (Non-Radar Procedures) appropriate real-life examples are used to illustrate the reasoning behind procedures used by air traffic controllers utilizing the non-radar methods. The liberal use of figures and example phraseology is used to assist the student in achieving an overall understanding of the air traffic control system. Prerequisites: ATT 2820, ASC 1210. Special fee. (3hr. lecture)

AVM1010

Aviation Industry Operation 3.00 credits

The course provides insight into the development and present status of aircraft and air transportation, governmental organizations, controls and regulations, and career opportunities in the field. (3hr. lecture)

AVM1022

Flight Operations 3.00 credits

An investigation of the occupational duties, responsibilities, and physical facilities required by the positions of pilot, co-pilot, flight engineer, dispatcher and flight attendant. (3 hr. lecture)

AVM1062

Aviation Career Planning 1.00 credits

This course provides direction and guidance in career planning for all aviation students. Topics of discussion will include the job search education and training requirements, resume writing, business etiquette, interview skills and follow-up techniques. (1 hr. lecture)

AVM1121

Hazardous Materials/Dangerous Goods

3.00 credits

This course is designed to provide the student with knowledge of dangerous goods/hazardous materials and their effect in air transportation and logistics. The students will be conversant in hazardous material regulations for cargo and passenger transportation. The course will encompass the identification, labeling, packaging and handling of 9 types of dangerous goods in air transportation and general logistics. Prerequisite: AVM 2120. Special fee. (3 hr. lecture)

AVM 1160

Aviation Maintenance Programs and Inspections

3.00 credits

This course provides an in-depth study of aircraft inspection programs and maintenance scheduling procedures. Students will learn national and international regulations governing aircraft inspection, maintenance evaluation, and the required procedures to update airline and governmental maintenance technical manuals. (3 hr. lecture)

AVM 1161

Aircraft Performance Measures and Maintenance Requirements

3.00 credits

Students will learn aircraft performance measures and maintenance requirements for airplanes powered by reciprocating, turboprop, and/or jet turbine and turbofan engines. Topics include stability and control, weight and balance, performance charts and graphs, and takeoff and cruise control, airplane performance characteristics, from which they will extract data that maximizes performance. (3 hr. lecture)

AVM 1162

Maintenance Repair and Overhaul (MRO) Interactions with Commercial Airline Operations

3.00 credits

Students will learn the Maintenance Repair and Overhaul (MRO) Procedures in Commercial Airline Operations. Topics include, airline maintenance operations,

engineering, maintenance, repair of structures, systems, and aircraft components. In addition, students will explore MRO financing, domestic and off-shore operations, regulatory requirements, logistics, supply chain support, human resources and industry oversight. (3 hr. lecture)

AVM 1163

Policies and Procedures for Commercial Airlines Maintenance Programs

3.00 credits

Students will learn the maintenance policies and programs for commercial airlines. Concepts of Maintenance Steering Group (MSG) and Reliability Centered Maintenance (RCM) programs, Maintenance Control by Reliability Methods (MCEM) program, and Operational Availability (OA) for Commercial Aircraft will be discussed. (3 hr. lecture)

AVM 1164

Logistics and Maintenance Programs for Commercial Airlines

3.00 credits

This course focuses on the concepts and application of logistics and supply chain management utilized within the aviation maintenance industry to increase efficiency in production and maintenance. Students will learn the logistics support from Maintenance Repair Operators and Original Equipment Manufacturers in aviation maintenance operations. (3 hr. lecture)

AVM1301

Aviation Sales and Promotion 3.00 credits

A presentation and utilization of sales methods, sales tools, sales opportunities and personal sales skills requirements for entry level sales employment in the aviation industry. Included are sales campaign planning and implementation factors of flight, travel and cargo options. (3 hr. lecture)

AVM1440

Aviation/Airport Security 3.00 credits

This course will provide the student with knowledge of the issues and strategies that are used to protect the national air-

space system, airports and airlines from security threats. The various types of threats and responses to those threats will be covered. In addition, the legal requirements planning issues, physical equipment and facility requirements and personnel issues will also be discussed. (3 hr. lecture)

AVM1520
Airline Reservations
3.00 credits

Prepares students for airline employment opportunities through a familiarization of the procedures involved in airline reservations, cargo reservation and route structures, using the American Airline's SABRE reservations and LATA systems. This course is not approved for the Travel Agency Management degree. A.S degree credit only. Special fee. (3 hr. lecture)

AVM1521
Airline Ticketing
3.00 credits

A preparation for airline employment opportunities requiring the responsibilities of airline ticketing procedures manual and automated (American Airline's SABRE system) for domestic and international ticketing, tele ticketing, boarding procedures, and immigration guides. This course is not approved for the Travel Agency Management Degree. Special fee. (3 hr. lecture)

AVM1949
Co-op Work Experience 1: AVI
3.00 credits

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. Prerequisite: 2.0 minimum GPA, approval of Co-op Program Director, minimum of 6 credits in field or work approved experience. (3 hr. lecture)

AVM2120
Air Cargo
3.00 credits

The course develops a comprehensive grasp of the characteristics and evolution of air cargo, its impact on United States industry, inherent problems and future development. (3 hr. lecture)

AVM2410
Principles of Airport Management
3.00 credits

This course provides the student with a broad background in the Principles of Airport Management. This includes the airport system and its history, planning, land use, community relation issues, financial issues, capacity and growth, operations, organization and administration. Special fee. (3 hr. lecture)

AVM2431
Customer Service Agent
3.00 credits

Covers the generic skills needed for any airline position involving regular contact with the traveling public. Includes human relations, personal appearance enhancement, etiquette, conflict management, speech skills, and the acquisition of attributes that would promote a proper professional image. (3 hr. lecture)

AVM2441
Aviation Safety & Human Factors
3.00 credits

This course will provide the student with an understanding of human factors and safety concepts as they apply to aviation. There will be an evaluation of aircraft accidents and their causal factors. Accident prevention measures are stressed as integral parts of an aviation safety program. (3 hr. lecture)

AVM2450
Airport Facilities/Financial Planning
3.00 credits

This course provides the student with an in depth knowledge of the techniques and strategies of the airport master plan in planning airport facilities and financial resources. Forecasting, demand analysis, sources of funding, planning requirements,

environmental issues and requirements and compliance issues will be discussed. Also implementation and control issues, financial management, budgets, costs and revenues as well as airport economics will be discussed. Prerequisite: AVM 2410. Special fee. (3 hr. lecture)

AVM2510
Airline Management
3.00 credits

An insight relative to the business policies and the functions of management in airline operations. Course involves various internal managerial facets and the impact of external regulatory and economic implications. (3 hr. lecture)

AVM2515
Airline Marketing
3.00 credits

A differentiation of the functions of marketing in airline operations; market research, demand analysis, advertising and promotion, sales, traffic, and the theory of price determination. (3 hr. lecture)

AVM2949
Co-op Work Experience 2: AVI
3.00 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. Prerequisite: 2.0 minimum GPA, approval of Co-op Program Director, completion of AVM 1949. (3 hr. lecture)

Agriculture & Related Technologies

ATE1110
Animal Anatomy
3.00 credits

This course explores the physical and functional phenomena that interact to sustain life in animals. The student will learn

the relationships of all of the systems in domestic animals, such as the osseous apparatus, the respiratory, digestive, genitourinary, endocrine, and nervous systems. The student will also be introduced to the descriptive and topographical terms needed to communicate with the professional staff. Prerequisites: CHM 1033, 1033L, ENC 1101; corequisites: ATE 1110L, 1211, 1650L. (3 hr. lecture)

ATE1110L
Animal Anatomy & Physiology Lab
1.00 credits

This course will complete the coverage and understanding of the physiological and anatomical relationships required for further development as a veterinary technician. This course will correlate with lecture material learned in the Animal anatomy and Animal Physiology lecture courses. Anatomical dissection, necropsy, examination of live animals will be used as well as the study of radiographs, skeleton models and histological sections. (2 hr. lab)

ATE1211
Animal Physiology
3.00 credits

This course is designed to explore the terminology related to animal physiology, in addition to all aspects of the functions of systems in small and large animals. (3 hr. lecture)

ATE1630
Pharmacology for Veterinary Technicians
2.00 credits

This introductory course reviews drug classifications and office procedures/management. Students will learn methods of calculating appropriate drug dosage, routes of administration, and evaluation of drug efficacy as well as office procedures used in veterinary hospital management. (2 hr. lecture)

ATE1650L
Introduction to Clinical Practice 1
1.00 credits

This introductory course is designed to acquaint the student with skills associated with veterinary clinical practice. Students

will learn basic office, laboratory and nursing skills, including hospital/office management, restraint, history taking, examination room techniques, administration of medication, basic parasitology, and basic clinical pathology procedures. (3 hr. clinic)

ATE1940
Veterinary Clinical Experience 1
3.00 credits

This entry clinical course provides supervised clinical experience in a veterinary facility. Students will learn and reinforce competencies in clinical laboratory procedures, venipuncture techniques, physical examination of patients, administration of intramuscular and subcutaneous injections and exam room protocol. A.S. degree only. (144 hr. clinic)

ATE1941
Veterinary Clinical Experience 2
3.00 credits

This course consists of supervised clinical experience in the veterinary workplace. Students will learn to enhance the competencies from ATE 1940 Veterinary Clinical Experience 1 while adding application of classroom knowledge in pharmacology, clinical laboratory procedures, and radiology. A.S degree credit only. (144 hr. clinic)

ATE2050L
Animal Nursing & Medicine Laboratory 2
2.00 credits

The student will practice training a dog, and applying corrections for common behavioral problems. Clinical training in a small animal necropsy is also presented. Prerequisites: ATE 1110, 2631, 2655L; corequisite: ATE 2612. (4 hr. lab)

ATE2611
Animal Medicine 1
3.00 credits

This course is designed to acquaint the student with anesthesiology, asepsis and general surgical nursing care, essentials in pharmacy and pharmacology, and concepts in microbiology, virology and immunology. Prerequisites: ATE 1110, 1211; corequisites: ATE 2661, 2942, 2631, 2655L. (3 hr. lecture)

ATE2612
Small Animal Nursing 2
3.00 credits

A study of the basic concepts of nutrition, obstetric, and pediatric care, as well as the important aspects regarding zoonotic diseases, public health and animal behavior. The student will also be introduced to alternative medicine, including holistic concepts, homeopathic, acupuncture, chiropractic and other emerging specialties. Prerequisites: ATE 1110, 2611, 2631, 2655L; corequisite: ATE 2050L. (3 hr. lecture)

ATE2614
Animal Medicine 2
3.00 credits

This course will explore general pathology, causes and nature of disease, toxicology, and an overview of pathologies of major systems, as well as immunity disease prevention, common vaccinations and diseases relating to small animals. Prerequisites: ATE 1110, 2611. (3 hr. lecture)

ATE2631
Small Animal Nursing 1
3.00 credits

The student will master the technical skills of medicating animals and the taking and processing of radiographs. This course also covers general care, including grooming and bathing, feeding and watering, nail trimming, ear cleaning, anal sac expression, and determination of vital signs. Prerequisites: ATE 1110, 1211; corequisites: ATE 2611, 2655L. (3 hr. lecture)

ATE2636
Large Animal Clinic & Nursing Skills
2.00 credits

This course is designed to acquaint the student with the fundamentals of large animal herd management, reproductive physiology and lactation physiology. Aspects of equine, bovine, ovine and porcine husbandry will be included. Prerequisites: ATE 1110, 1211 corequisite; ATE 2636L. (2 hr. lecture)

ATE2636L
Large Animal Clinic & Nursing Skills
Laboratory
1.00 credits

This course is designed to acquaint the student with the fundamentals of large animal husbandry, herd health management, preventive medicine, animal restraint and nutrition as it relates to the bovine, equine, porcine and caprine species. Techniques discussed in the Large Animal Clinic and Nursing skills course such as venipuncture, injections and administration of other oral medications will be reviewed and demonstrated. One laboratory session will be devoted to poultry science. (2 hr. lab)

ATE2638
Animal Lab Procedures 1
3.00 credits

This course is designed to introduce the veterinary technician to common parasites and their life cycles seen in routine veterinary practice. Also, hematology and the kinetics of the hematopoietic system are discussed with emphasis on normal blood smears and common changes seen during disease stages of the domestic animals. Prerequisites: ATE1110, 1211; corequisite: ATE 2638L. (6 hr. lab)

ATE2638L
Animal Lab Procedures 1 Laboratory
2.00 credits

This course is designed to acquaint the student with clinical laboratory procedures covered in the Animal Laboratory Procedures 1 course. Areas of emphasis include hematology, coagulation and parasitology as well as general laboratory etiquette. Corequisite: ATE 2638. (4 hr. lab)

ATE2639
Animal Lab Procedures 2
3.00 credits

This course serves as a continuation of Animal Laboratory Procedures 1 and covers immunology, liver function and diagnostic testing for liver abnormalities, kidney function and testing used in disease states, urinalysis, pancreatic evaluation; normal and abnormal exfoliative cytology; and the evaluation of endocrine disorders. It also will include principles of serological

testing and microbiological methods and protocols. Prerequisites: ATE 2638, 2638L; corequisite: ATE 2639L. (3 hr. lecture)

ATE2639L
Animal Lab Procedures 2 Laboratory
2.00 credits

This course provides experience in the practical applications discussed in Animal Laboratory procedures 2. It also will include principles of serological testing and microbiological methods and protocols as well as dentistry for the veterinary technician. Prerequisites: ATE 2638, 2638L; corequisite: ATE 2639. (4 hr. lab)

ATE2652L
Introduction to Clinical Practice 2
1.00 credits

The clinical application of basic veterinary radiology and surgical nursing skills will be the primary focus of this practicum. The student will demonstrate skills under supervised instruction. Prerequisite: ATE 1110, 1650L. (1 hr. lab)

ATE2655L
Animal Nursing & Medicine
Laboratory 1
2.00 credits

This course is designed to acquaint the student with exam room and restraining techniques, anesthesia and surgical protocols and diagnostic imaging procedures used in veterinary hospitals. (4 hr. lab)

ATE2661
Large Animal Diseases
1.00 credits

This course is designed to acquaint the student with the fundamentals of preventative medicine and with the common disease seen in the large animal species. Aspects of equine, bovine, ovine and porcine diseases and common treatments will be emphasized. Prerequisites: ATE 1110, 2636, 2636L; corequisite: ATE 2611. (1 hr. lecture)

ATE2671C
Lab Animal Medicine
2.00 credits

This foundation course provides instruction on laboratory animal care. Students will

learn the technical aspects of laboratory animal care, including restraint and handling, common diseases and nutrition. The animals studied include rabbits, rats, mice, guinea pigs, hamsters and primates. (1 hr. lecture; 2 hr. lab)

ATE2710
Animal Emergency Medicine
2.00 credits

This course is designed to acquaint the student with fundamentals of emergency veterinary medicine, including veterinary first aid, toxicology and specialized medical techniques and procedures. Prerequisites: ATE 1110, 1211; corequisites: ATE 2611, 2631, 2655L. (2 hr. lecture)

ATE2722C
Avian & Exotic Pet Medicine
2.00 credits

This course is designed to acquaint students with the medical care associated with exotic animal and avians. Students will learn types of species that may be encountered in a practice and their associated care techniques. (1hr. lecture; 2 hr. Lab)

ATE2942
Veterinary Clinical Experience 3
4.00 credits

This course provides clinical experience to the student, under the supervision of a veterinarian. Students will enhance the competencies learned in ATE 1940 - Clinical Experience 1 and ATE 1941 - Veterinary Clinical Experience 2 and master skills associated with advanced veterinary technology practice. Prerequisite ATE 1941. (192 hr. clinic)

ATE2943
Veterinary Clinical Experience 4
1.00 - 3.00 credits

This course consists of supervised clinical experience in a work place approved by the college. All aspects of critical and non-critical care will be observed and performed under the supervision of a veterinarian. The areas of competency of Veterinary Clinical Experience 1, 2 and 3 will be reinforced. The student receives no monetary compensation for the nine clinical hours.

Prerequisite: ATE 2942; corequisites: ATE 2050L, 2612, 2614. (9 hr. clinic)

HOS1010
Horticulture 1
3.00 credits

This is an introductory course on the principles of horticulture. Students will learn plant structure and function, plant propagation, plant nutrients and fertilizers, potting media, soils, pruning, and plant pests. A survey of various fields in ornamental horticulture will also be covered. (3 hr. lecture).

HOS1011
Horticulture 2
3.00 credits

The student will learn the maintenance and management aspects of horticulture business (nursery facility or landscape maintenance and design) including irrigation systems, plant growing facilities, plant propagation equipment, and landscape maintenance equipment. Hands-on practice in programming of plant production crops and nursery design in our nursery. Prerequisite: HOS1010. A.S. degree only. Special fee. (3 hr. lecture)

IPM2112
Principles of Entomology
3.00 credits

This is an introductory course on the principles of entomology. Students will learn to identify characteristics of arthropods, the insect orders, and the growth cycle of insects. Students will also address insect pest's specific to South Florida and methods to responsibly manage plant pests. (3 hr. Lecture)

IPM2301
Pesticide Applications
3.00 credits

Students will learn government regulations with regards to pesticide mixing and application, and safety equipment. Preparation for the restricted use applicators license exam will be covered. Special fee. (3 hr. lecture)

IPM2635
Introduction to Plant Pathology
3.00 credits

The students will learn to identify diseases that affect plants and management practices for different types of plant diseases. Environmental factors contributing to a plant's susceptibility to a particular disease will also be discussed. Methods of prevention, eradication, and control will be given for each specific disease. Special fee. (3 hr. lecture)

LDE2000
Planting Design 1
4.00 credits

Basic principles of design, on-the-job sketching and plan presentation as used by nurseries. Prerequisite: ORH 1510. Laboratory fee. (2 hr. lecture; 4 hr. lab)

LDE2310
Irrigation Design & Maintenance
3.00 credits

The students will learn the design, maintenance, and installation of nursery and landscape irrigation systems. All types of nursery systems will be covered including field, shade house, and greenhouse. Both sprinkle and low volume drip systems will be surveyed for appropriateness in nursery and landscape uses. Includes occasional weekend hands-on activities. A.S. degree only. Special fee. (3 hr. lecture)

ORH1251
Nursery Practices 1
3.00 credits

The student will learn the techniques and practices in commercial production of ornamental plants. Emphasis on types of nurseries. Prerequisite: HOS1010. A.S. degree only. Laboratory fee. (2 hr. lecture; 2 hr. lab)

ORH1510
Landscape Plant Identification 1
3.00 credits

Students will learn the identification and usage of plants used in the horticultural trade in South Florida. Subject matter includes trees, shrubs, and flowering plants for both interior and outdoor use. (3 hr. lecture)

ORH1511
Landscape Plant Identification 2
3.00 credits

The student will learn to identify and classify plants used in the horticulture industry in South Florida. Prerequisite: ORH1510. (3 hr. lecture)

ORH1840C
Landscape Construction
2.00 credits

The student will learn to analyze a landscape site, read blueprints, and prepare a site for landscape installation. Basic construction techniques such as creating and maintaining wood structures, mixing concrete, and installing hardscape will be covered. Taught from a hands-on perspective. Occasional Saturday activities. Laboratory fee. (4 hr. lab)

ORH2230
Exterior Plant Usage and Maintenance
3.00 credits

This course emphasizes the maintenance and installation of exterior plants in the South Florida Environment. Students will learn installation procedures for bedding plants, shrubs, trees/palms, and vines. Students will be required to become familiar with all plants and equipment names and uses. Special Fee. (3 hr. lecture)

ORH2277
Foliage Plant Production
3.00 credits

Students will learn plant propagation techniques such as the taking of cuttings, divisions, and seeds, along with aseptic and meristem culture. Students will be required to look for insect diseases, and other cultural problems associated with foliage production and learn how to combat these problems. Environmental factors affecting foliage plants such as water, humidity, light, and temperature will be studied in relation to growing foliage plants specifically in South Florida. A.S. degree only. Special fee. (3 hr. lecture)

ORH2835C
Computer-Aided Landscape Design 1
2.00 credits

Students will learn CAD fundamentals and then create computer generated drawings. Using these fundamentals and landscape design concepts, students will generate both landscape and hard scape aspects of residential landscape designs. A combination lecture/lab course. Prerequisites: CGS 1060 (or equivalent) and working knowledge of landscape plants or permission of instructor. (1 hr. lecture; 2 hr. Lab)

ORH2837C
Computer-Aided Landscape Design 2
2.00 credits

Students will carry out landscape design projects with CAD as required in a landscape design business. Appropriate landscape design principles will be applied to landscape projects and presented in CAD-generated drawings. A combination lecture and lab course. Prerequisites: ORH 2835C, CGS 1060 (or equivalent) and working knowledge of landscape plants or permission of instructor. (1 hr. lecture; 2hr. lab)

ORH2932
Special Topics in Landscaping
1.00 credits

Special topics in landscaping offers horticulture students the opportunity of enriching their education with aspects of the field not covered in the A.S. program. Topics will be offered in the areas of irrigation, appropriate landscaping, recent innovations, pests and pesticides, etc. (1 hr. lecture)

ORH2949
Landscape Technology Internship
3.00 credits

The internship will provide students with hands-on work experience in horticulture. Landscape, or related technology industries. Students will learn employability skills, and the specific skills and safety requirements necessary for effective work in this environment. (144 hr. Internship)

American Sign Language and ASL Interpretation

ASL1000
Survey of Deaf Studies
3.00 credits

This course This course provides an overview of aspects of deafness including demographics, audiology, education, rehabilitation, assistive devices and organizations on deafness and interpreting. (3 hr. lecture)

ASL1140C
American Sign Language 1
4.00 credits

This course provides introductory information on the linguistics of American Sign Language and approximately 500 sign concepts. Course includes lecture, discussion and lab practice. (4 hr. lecture)

ASL1150C
American Sign Language 2
4.00 credits

This course provides continued instruction in the linguistic principles of American Sign Language and an additional 500 sign concepts. Course includes lecture, discussion and lab practice which is conducted in ASL. Prerequisite: ASL 1140C. (4 hr. lecture)

ASL1906
Directed Independent Studies
1.00 - 2.00 credits

This course provides continued instruction in the linguistic principles of American Sign Language and an additional 500 sign concepts. Course includes lecture, discussion and lab practice which is conducted in ASL. Prerequisite: ASL 1140C. (4 hr. Lecture)

ASL2160C
American Sign Language 3
4.00 credits

This course provides linguistic principles of American Sign Language at the intermediate level and an additional 500 sign concepts. Lecture, discussion and lab practice are included. Students have increased opportunities for interaction with mem-

bers of the deaf community. Increasingly, class sessions are conducted in ASL. Prerequisite: ASL 1150C; Pre/corequisite: ASL 2210. (4 hr. lecture)

ASL2200C
American Sign Language 4
4.00 credits

This course This course provides linguistic principles of American Sign Language at the advanced level and an additional 500 sign concepts including idioms used in ASL. Lecture, discussion and lab practice are included. Class sessions are conducted predominately in ASL. Prerequisite: ASL 2160C. (4 hr. lecture)

ASL2210
ASL Conversational Skills
3.00 credits

This course will provide practice communication in American Sign Language (ASL). Students will use previously acquired knowledge of ASL vocabulary and linguistic principles to communicate in the language. Prerequisite: ASL 1150C or 2160C. (3 hr. lecture)

ASL2220
Receptive Skills Development
3.00 credits

The course will focus on increasing the students 'receptive understanding of signed communications. Examples of American Sign Language (ASL) will be presented via videotapes and live interactions with deaf persons. Students will identify all the components and linguistic features of ASL and will provide appropriate English translations either in speech (paraphrasing) or in written form. Prerequisite: ASL 1150C. (3 hr. lecture)

ASL2400
Linguistics of American Sign Language
3.00 credits

The course is designed for persons who already have an understanding of ASL principles. Provides an overview of the various systems of manual communication used in the U.S. including PSE, Cued Speech and signed English. Prerequisite: ASL 2160C. (3 hr. lecture)

ASL2430
Manual alphabet Skills Development
3.00 credits

The course content focuses on acquiring both expressive and receptive skill in the manual alphabet of American Sign Language, commonly known as finger-spelling. A performance test is given at the beginning of the course to determine existing competency. Prerequisites: ASL 1140C, 1150C. (3 hr. lecture)

ASL2510
Deaf Culture and Community
3.00 credits

The course provides an in-depth study of the lives and experiences of deaf and hard of hearing persons and examines perceptions of belonging to a unique cultural group. Cultural characteristics are examined alongside the impact of hearing loss on one's family, friends, and employment. Multicultural issues and the impact of hearing loss are examined within various ethnic groups. Societal attitudes regarding disability in general, and hearing loss and communication difficulties in particular, are addressed. (3 hr. lecture)

SPA2001
Introduction to Communication Disorders
3.00 credits

An introduction to functional and organic speech problems which interfere with oral communications and to the profession of speech science and correction; speech and hearing therapy, in public, private, or governmental agencies. (3 hr. lecture)

Anthropology

ANT2000
Introduction to Anthropology
3.00 credits

This course covers the theoretical and conceptual fundamentals for understanding the human species through an integrated study of the cultural, biological, evolutionary and linguistic aspects of our kind. Students will learn about human origins as well as human cultural diversity from antiquity to the present. (3 hr. lecture)

ANT2410
Introduction to Cultural Anthropology
3.00 credits

The nature of culture, personality, and social organizations. Emphasis is on the customs of pre-literate people. (3 hr. lecture)

ANT2511
Introduction to Physical Anthropology
3.00 credits

Man as a biological unit in the animal kingdom. The human fossil record, living primates, the criteria of race and races of man, principles of biological evolution and human genetics. (3 hr. lecture)

Architecture

ARC1113
Sketchbook Studies
3.00 credits

This course focuses on the development of perception and awareness of major architectural monuments, historical sites, and public spaces through two-dimensional architectural renderings performed in situ. Freehand perspective drawings will be created in black and white, with color as applicable. Mediums of presentation will vary from pencil to pen. (3 hr. lecture)

ARC1115
Architectural Communications 1
2.00 credits

Exercises in freehand drawing, sketching and linear perspective are designed to increase the student's awareness of the architectural environment. This is accomplished through a series of form studies of nature, architectural forms, and abstract elements of composition. Corequisite: IND 1020. Laboratory fee. (1 hr. lecture; 2 hr. lab)

ARC1126
Architectural Drawing 1
4.00 credits

This course exercises the visualization and drafting of architectural objects and construction conditions. Students will learn to draw orthographic projections, isometric and sectional drawings as an expression of architectural communication. Topics include drawing of plans, elevations, details, sched-

ules, and sections of wood frame and masonry structures. (2 hr. lecture 4 hr. lab)

ARC1128
Architectural Drawing 2
4.00 credits

A simulation of an actual architectural drafting room. The instructor issues preliminary design drawings from which the student prepares working drawings. The problems presented have varied materials and structural systems, differing occupancies, etc., offering a series of new experiences in architectural drawing. Prerequisite: ARC 1126. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ARC1301
Architectural Design 1
4.00 credits

Introductory course to architectural design, its scope, methods and vocabulary interfacing graphics and design as a means towards an awareness and understanding of basic organizational principles. Design concepts analyzed through graphical representation and modeling. Pre/corequisite: ARC 1115. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ARC1302
Architectural Design 2
4.00 credits

A continuation of ARC 1301, emphasizing the application of ordering concepts, and aspects and determinants of form and space. An individual design process is developed by the student. Pre-/Co-Requisites: ARC 1126, 2701; Prerequisite: ARC 1301. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ARC1949
Co-op Work Experience 1: ARC
1-3.00 credits

This course is designed to provide training in the students' field of study through work experience. Students will learn to make connections between their internship experiences, academic coursework, and career goals. Students are graded on the basis of documentation of learning and goal achievement as reported by

both student and employer. Prerequisite: Departmental Approval (1-3 hr. lecture)

ARC2053
Architectural Computer Applications
4.00 credits

Applications of software and computer languages in the fields of architecture, building construction and interior design. Corequisite: ARC2052. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ARC2056
Computer Aided Architectural Presentation
4.00 credits

This course is designed to introduce the student to the concept of three-dimensional modeling and rendering for the purpose of producing an animated architectural presentation. Laboratory fee. (2 hr. Lecture; 4 hr. lab)

RC2171
Computer Aided Drafting 1
4.00 credits

Computer-aided drafting as it applies in the fields of architecture and interior design using office simulation. Emphasis is on the production of computer-aided drafting of working drawings involving different types of structure. Prerequisite: ARC 1126 or 2461. Laboratory fee. (2 hr. lecture; 4 hr. Lab)

ARC2172
Computer Aided Drafting 2
4.00 credits

This course is designed for students with previous computer-aided design knowledge. Students will use both 2-dimensional and 3-dimensional CAD software to further develop their abilities to apply CAD techniques to the solution of architectural, engineering, and interior design problems. Prerequisite: ARC 2171. Laboratory fee. (2 hr. lecture; 4 hr. Lab)

ARC2178C
Introduction to Building Surfacing
4.00 credits

A BIM course introducing building surfacing and form finding technology. Students will learn the practice of creating com-

plex building models and non-traditional architectural geometries, exploring design intent modeling, and generating solid models from surface models through AEC related objects. Design drivers, computational geometry, and advanced assembly techniques are explored. Prerequisite: ARC 2180C (2 hr. lecture; 4 hr. lab)

ARC2180C
Introduction to 3D Building Modeling
4.00 credits

An introduction to 3D building modeling and generative drafting as it applies to the fields of architecture and interior design. Students will learn current practices in 3D building design by emphasizing the manipulation of commands used for modeling, drawing, editing, dimensioning, basic drawing management, and drawing output. Prerequisites: ARC 2172, CGS 1060, MAC 1105. (2 hr. lecture; 4 hr. lab)

ARC2201
Theory of Architecture
3.00 credits

An introduction to the meaning of Architecture to society, the foundation theories of architecture and an exposure to the ways and means of the creative process. Prerequisite: ARC 1115. (3 hr. lecture)

ARC2303
Architectural Design 3
5.00 credits

Integration of the natural and built environment with physiological, functional, organizational, spatial and environmental forces. Prerequisites: ARC1302 and 2461. Laboratory fee. (2 hr. lecture; 6 hr. lab)

ARC2304
Architectural Design 4
5.00 credits

A continuation of ARC 2303. Introduction to programming and design methods in architecture. Applications of building technology in the design process. Overview of computer applications in design. Prerequisite: ARC 2303; pre/corequisites: ARC 2053, 2681. Laboratory fee. (2 hr. lecture; 6 hr. lab)

ARC2312C
Introduction to Building Assembly Modeling
4.00 credits

Introduction to the principles of Building Assembly Modeling. Students will learn to explore a building as an assembly of architectural objects and subassemblies, using virtual design and construction software. In addition, students will learn part modeling, assembly modeling, generative drafting, and general representational and modeling techniques. Prerequisites: ARC 2172, CGS 1060, and MAC 1105. (2 hr. lecture; 4 hr. lab)

ARC2461
Architectural Materials and Construction 1
4.00 credits

An introduction to basic materials and methods of building construction. Emphasis is on wood, concrete, unit masonry, and light steel construction. Laboratory projects may include working drawings interpretation, sketching construction details, or field trips to construction sites and fabricant plants. Designed primarily as the initial materials and methods course for architectural transfer students. Prerequisite: ARC 1126 or BCN 1251. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ARC2580
Architectural Structures 1
4.00 credits

A basic structural course, designed primarily for Architectural and Construction majors, covering the fundamentals of statics. Timber design emphasized. Prerequisite: MAC1114; pre-/corequisites: PHY 2053, 2053L and ARC 1126, 2461. Laboratory fee. (3hr. lecture; 2 hr. lab)

ARC2681
Environmental Technology
3.00 credits

An introduction to technology aspects of building design which relates to human comfort, safety, and building performance. Includes a survey of the fundamentals of water supply, waste lines, plumbing equipment, heat and air conditioning; solar applications; and electrical components

and equipment in the design and construction of buildings. Prerequisite: ARC 1126. (3 hr. lecture)

ARC2701
History of Architecture 1
3.00 credits

A general survey of architecture from primitive times through the 18th century including an integration of art forms, structural forms and ornamental forms used in various cultures of the world during those times. (3 hr. lecture)

ARC2702
History of Architecture 2
3.00 credits

A general survey of architecture from the 19th century through the present, including an integration of art forms, structural forms, and ornamental forms used in various cultures of the world during these times. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

ARC2765
An Introduction to: Cities of the World
3.00 credits

This course is a comparative study of contemporary cities both industrialized, developing and redeveloped and/or reconstructed. This course is conducted abroad. Students will learn about improving the quality of our man-made environment by seeing first-hand, positive progress towards civilizing cities of the world. Separation of pedestrian and traffic ways, and the amenities which result, will be a major element of study. Assiduous use of the natural environment will be observed and studied. (3 hr. lecture)

ARC2767
Architectural History: Urban Spaces
3.00 credits

Studies in situ of major urban spaces, with accompanying critical analyses of those spaces. An historical overview of the architecture of the places and spaces studied, with specific attention given to the ambiance, color, light, texture, and patterns, will be presented. The history of the community activities occurring in

the spaces will be further analyzed, with appropriate urban and regional planning evaluations. Principles of positive planning will be studied, with the intention of developing knowledge of urban planning process and practice. (3 hr. lecture)

ARC2949
Co-op Work Experience 2: ARC
3.00 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. Prerequisite: 2.0 minimum GPA, approval of Co-op Program Director and completion of ARC 1949. (3 hr. lecture)

Art

ARH1000
Art Appreciation
3.00 credits

The role of art in everyday living in the home, the school and the community. A lecture course illustrated with films and slides. (3 hr. lecture)

ARH2050
Art History 1
3.00 credits

A world survey of the visual arts from pre-history to 800 A.D. (3 hr. lecture)

ARH2051
Art History 2
3.00 credits

A world survey of the visual arts from 800 to 1850 A.D. Prerequisite: ARH 2050. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

ARH2402
Art History 3
3.00 credits

A world survey of modern visual arts from 1850 A.D. - present. Prerequisite: ARH 2051. (3 hr. lecture)

ARH2740
Cinema Appreciation
3.00 credits

An analysis of the cinema as an important social force and an artistic medium. Significant American, British, and foreign language films will be shown and discussed. Prerequisite: HUM 1020. Fulfills Gordon Rule writing requirement. (2 hr. lecture; 2 hr. lab)

ARH2857
Introduction to Museum Studies
3.00 credits

This is a foundation course that offers a practical introduction to the nature, context and operations of museums with the intention of providing practical examples and indicators of good practices. This course introduces students to the history and theory of museums and museum practices, museum administration, exhibition planning, museum education and museum careers. (3 hr. lecture)

ART1201C
Basic Design
3.00 - 4.00 credits

This introductory course is designed to familiarize students with the basic elements and principles of design and to give hands-on opportunity to transform visual and experiential information into basic forms. Creative individual thinking and image making and successful problem solving both aesthetically and technically are ultimate goals. (1-2 hr. lecture; 4 hr. lab)

ART1202C
Two-Dimensional Design
3.00 - 4.00 credits

This course is designed to give students an understanding of advanced concepts of two dimensional design and to give hands on opportunity to transform visual and experiential information into two-dimensional form. Creative individual thinking and image making and successful problem solving both aesthetically and technically are ultimate goals. (1-2 hr. lecture; 4 hr. lab)

ART1203C
Three Dimensional Design
3.00 - 4.00 credits

This course is designed to give students an understanding of the concepts of three-dimensional design and to provide hands-on opportunity to transform visual and experiential information into three-dimensional form. Creative individual thinking and image making and successful problem solving both aesthetically and technically are ultimate goals. Self-evaluation and safety skills will also figure prominently. Prerequisite: ART 1202C. (1-2 hr. lecture; 4 hr. lab)

ART1205C
Color and Composition 1
3.00 - 4.00 credits

ART 1205C is a studio art course that is focused on learning the theory and practice of color mixing and compositional arrangement. The course will examine the various interactions of color and their creative application so that the student may use color more effectively in fine arts and applied design. (1-2 hr. lecture; 4 hr. lab)

ART1300C
Drawing
3.00 - 4.00 credits

Basic problems in freehand drawing, including perspective, still-life and landscape. Emphasis is on developing a sense of structure through line, form and texture. (1-2 hr. lecture; 4 hr. lab)

ART1330C
Figure Drawing
3.00 - 4.00 credits

Drawing and painting from the live model with emphasis on structure, movement and expression. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART1803C
Workshop for ART Research and Practice: Studio
6.00 credits

Small enrollment sections. Interdisciplinary, team taught, introductory studio experience in a wide variety of media. In-depth exploration of creative processes, principles of artistic integrity, and the nature of

artistic meaning. Concepts in two-dimensional and three-dimensional design will be explored through studio experience. (12 hr. lab)

ART1949
Co-op Work Experience 1: ART
3.00 credits

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

ART2142C
Advanced Metals
4.00 credits

Individualized instruction in metal forming specifically oriented toward the students aesthetic concerns. May be repeated for credit. Prerequisites: ART 2150C, 2151C. (2 hr. lecture; 4 hr. lab)

ART2150C
Jewelry and Metalsmithing 1
4.00 credits

An introduction to creative design as applied to jewelry, flatware, and hollowware forms. Prerequisite: ART 1202C or 1300C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ART2151C
Jewelry and Metalsmithing 2
4.00 credits

Advanced techniques in jewelry making and metalsmithing. Prerequisite: ART 2150C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ART2301C
Drawing 2
3.00 - 4.00 credits

In this course students will execute drawings in various media, working with the figure or from various assigned drawing problems which are more complex and incorporate other design possibilities.

Assignments in drawing will go beyond the realistic or literal and will incorporate media not usually used such as painting, collage, mixed media, and found objects. (1-2 hr. lecture; 4 hr. lab)

ART2302C
Advanced Drawing
3.00 - 4.00 credits

An exploration of varied approaches to drawing through studio problems. May be repeated for credit. Prerequisites: ART 1300C, 1330C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2400C
Printmaking 1
3.00 - 4.00 credits

Basic techniques of printmaking including relief prints (wood cut and wood engraving), intaglio (dry point and etching) and lithography. Prerequisite: ART 1202C or 1300C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2401C
Printmaking 2
3.00 - 4.00 credits

Advanced techniques in printmaking. Prerequisite: ART 2400C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2406C
Advanced Printmaking
3.00 - 4.00 credits

Individualized instruction on printmaking concepts specifically oriented toward the student's aesthetic concerns. May be repeated for credit. Prerequisites: ART 2400C, 2401C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2500C
Painting 1
3.00 - 4.00 credits

Studio problems in painting involving contemporary styles, techniques and materials. Prerequisite: ART 1202C or 1300C. (1-2 hr. lecture; 4 hr. lab)

ART2501C**Painting 2****3.00 - 4.00 credits**

Advanced techniques in painting. Prerequisite: ART 2500C. (1-2 hr. lecture; 4 hr. lab)

ART2502C**Advanced Painting****3.00 - 4.00 credits**

Individualized instruction in painting concepts specifically oriented to the student's aesthetic concerns. May be repeated for credit. Prerequisites: ART 2500C, 2501C. (1-2 hr. lecture; 4 hr. lab)

ART2600C**Computer Art****3.00 - 4.00 credits**

This course is an introduction to basic theory and skill techniques of visual communications using computers. It gives students a basic understanding of technical devices for the electronic production of visual images. Prerequisites: ART 1201C, ART 1300C. Special fee. (1-2 hr. lecture; 4 hr. lab)

ART2601C**Intermediate Computer Art****3.00 - 4.00 credits**

An intermediate computer art course focusing on the integration of computer technology with traditional design and fine art media such as illustration, painting, printmaking and photography. Prerequisite: ART 2600C. (1-2 hr. lecture; 4 hr. lecture)

ART2602C**Advanced Computer Art****4.00 credits**

An advanced computer art class which focuses on new and emerging computer technology utilizing multiple platforms to produce advanced computer art portfolio assignments in illustration, fine art, 2D animation and digital photography. (2 hr. lecture; 4 hr. lab)

ART2701C**Sculpture 1****3.00 - 4.00 credits**

An introduction to sculpting techniques and materials. Prerequisite: ART 1202C or

1300C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2702C**Sculpture 2****3.00 - 4.00 credits**

Advanced sculpturing techniques. Prerequisite: ART 2701C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2703C**Advanced Sculpture****3.00 - 4.00 credits**

Individualized instruction in sculptural concepts specifically oriented to the student's aesthetic concerns. May be repeated for credit. Prerequisite: ART 2701C, 2702C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2750C**Ceramics 1****3.00 - 4.00 credits**

Basic techniques in pottery design - forming, decorating, glazing and firing. Prerequisites: ART 1202C or 1300C. Laboratory fee. (1-2 hr. lecture; 4hr. lab)

ART2751C**Ceramics 2****3.00 - 4.00 credits**

Advanced techniques in pottery design and preparation. Prerequisite: ART 2750C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2771C**Advanced Ceramics****3.00 - 4.00 credits**

Advanced work in ceramics. Emphasis placed on individual concepts and their application in ceramics. May be repeated for credit. Prerequisites: ART 2750C, 2751C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

ART2802C**Visual Arts Workshop****1.00 - 4.00 credits**

Special Studio Topics including methods, materials and theory related to specific studio processes. Permission of department chairperson. May be repeated for credit. (2-8 hr. lab)

ART2938**Exhibition Design****3.00 credits**

Students will be introduced to a basic language of visual elements (line, shape and three-dimensional form, color, space, texture, and value) and principles of design. Students will investigate how and why images are made, and how they are received and experienced. Emphasis will be placed on the exhibition design development processes and the variations in practice across different venues. (3 lecture hours)

ART2949**Co-op Work Experience 2: ART****3.00 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education office to obtain registration approval. (3 hr. lecture)

ART2950**Portfolio Preparation - ART****3.00 credits**

Provides students with knowledge and skills to compile a portfolio which prepares them for a college or professional career. Course content focuses on individual development through the use of varied media and styles. Emphasis is placed on selection, evaluation, and presentation. May be repeated for credit. (6 hr. lab)

Banking**BAN1004****Principles of Banking****3.00 credits**

In this course the students will learn the foundation, structure and function of financial systems. The course plan includes the review of the role of banks as businesses and their impact on the economy.

The students will receive an overview of the main entities that comprise the financial system: financial intermediaries, investments and financial markets. The students will be able to describe the risk infrastructure of financial institutions, the regulatory environment, and the responsibilities inherent in complying with regulatory requirements associated with safety and soundness of banks. (3 hr. lecture)

BAN1013
Negotiable Instruments and the Payments Mechanism
3.00 credits

This course is designed to provide students with an overview of payment systems, specifically negotiable instruments. The course plan includes a discussion of the requirements defined by Article 3 of the Uniform Commercial code and other laws applicable to negotiable instruments. In this course the students will learn the requirements associated with the transfer of negotiable instruments including but not limited to the parties involved and their rights. (3 hr. lab)

BAN1155
International Banking
3.00 credits

In this course the students will learn about the evolution of international banking and finance, the processes, the prevailing competition and the issue of cross-border risk exposure. The course plan provides a review of salient global financial events such as the merger of European currencies into single currency: the Eurodollar and the expansion of high speed electronic global payments. This course is designed for all level bankers, investment bankers or junior officers wishing to pursue a career in international banking. (3 hr. lecture)

BAN1231
Introduction to Commercial Lending
3.00 credits

This course provides an increased awareness of the credit underwriting process. It provides a comprehensive foundation to the lending process including technical and interpretative analysis of financial information from liquidity, solvency, ratio and cash

flow analysis to the basics for the completion of a credit approval memorandum. Students will learn the concepts of qualitative analysis including the assessment of industry risk, market risk and management risk. The course provides an understanding of the role of loan policy and the need to summarize the borrowers various risks into an appropriate credit risk rating. Pre-requisites: BAN2210 (3 hr. lab)

BAN1240
Installment Credit
3.00 credits

In this course the student will learn a comprehensive approach to consumer lending, identifying financial risks and the regulatory environment that impact and promote safety and soundness in lending. The course centers around providing a practical approach to the fundamentals of consumer installment lending, including a review of different loan products, their life cycles, the credit application process and the essentials of the closing process (3 hr. lecture)

BAN1241
Bank Cards
3.00 credits

This course presents an overview and update of the bank card industry. The development of the card, operational aspects, legal and regulatory issues, and implications for the future of the card are discussed in depth. (3 hr. Lecture)

BAN1425
Selling Bank Services
3.00 credits

Recognizing and meeting bank customer needs through checking accounts, savings services, loans to individuals, safe deposits, travelers checks and cross-selling. Identification of the services their banks offer, the scope and advantages of these banking services, customer needs based on a bank transaction or conversation with the customer and the appropriate service to the perceived customer need. Designed for tellers and new accounts personnel. (3 hr. lecture)

BAN1744
BankSim
3.00 credits

Through the use of a sophisticated computer model, participants actually "run" in a competitive society and a changing economy-a \$500 million commercial bank. Designed for operations, long term financial strength and asset utilization. (3 hr. lecture)

BAN1800
Law and Banking
3.00 credits

This course is designed to provide students with a comprehensive knowledge base in a range of areas within the commercial banking laws. The students will learn the fundamentals of legal and regulatory principles in the field of banking and their impact and application to bank products, services and client relationships. Through a carefully designed course plan, students new to banking will gain insight and understanding of US laws and regulations impacting the banking industry. (3 hr. lecture)

BAN2135
Bank Accounting
3.00 credits

This course is designed to help the bank employee understand the elements of accounting as they relate to and are applied in the banking environment. Prerequisite: ACG 2001 or ACG 2021. (3 hr. lecture)

BAN2210
Analyzing Financial Statements
3.00 credits

In this course the students will learn the framework and resources available to analyze financial statements and to assess a company's operation and future performance. The course covers the critical objectives with the assessment of business performance such as: the relationship between the company's business and financial strategy, their financial statements, ratio, profitability, balance sheet and cash flow analysis. The course plan includes the use of financial and accounting information to make lending/credit and investment decisions.

The course is targeted to a wide range of students including those pursuing careers in banking, general management, investment banking, financial analysis and consulting. Pre-requisites: ACG2021 (3 hr. lecture)

BAN2211
Applied Financial Statement Analysis
3.00 credits

This course provides a comprehensive analysis of business strategy, operating performance, financial condition and cash flow strength. The student will learn basic and advanced financial concepts impacting the viability of a business, including accounting rules, methods of credit analysis, assessment of financial ratios, historical financial analysis, cash flow and financial forecasting. Pre-requisites: BAN2210 (3 hr. lab)

BAN2253
Residential Mortgage Lending
3.00 credits

This course covers all phases of the residential mortgage lending process, including a foundation to the underwriting, credit analysis and servicing of residential mortgage loans. The student will learn the aspects of construction and permanent financing for residential property, real estate and mortgage law, financing options in real estate, appraisals, servicing, regulatory requirements and secondary mortgage markets. The students will become familiar with the critical issues necessary for any individual to operate successfully in the residential mortgage loan market. Target audience for this course includes loan officers, underwriters, loan processors and individuals interested in pursuing career in the mortgage lending business. (3 hr. lecture)

BAN2501
Money and Banking
3.00 credits

The course is designed to provide students with an overview of the US financial systems including theory and practice of monetary policy and financial instruments. Students will learn about interest rate determination, the structure and

role of banks, financial institutions in the intermediation process, the factors impacting inflation, and variables in the economy. The course plan is designed not only for students but individuals working in the financial services industry including junior officers to mid-management and entry level staff who are considering pursuing a career in the banking field. (3 hr. lab)

BAN2511
Marketing for Bankers
3.00 credits

Marketing of financial services is a specialized segment of marketing. It is highly competitive, making the process of selling for bankers a highly specialized and challenging endeavor. Changing market conditions, deregulation, the emergence of new competitors from within and external to the banking industry and the rapid integration of new technologies are some of the challenges bankers encounter. It covers the aspects of a consultative selling approach with emphasis on planning, implementing and fostering a long term advisory relationship with clients. The students will learn to become proficient on how to prepare for a successful sales presentation and closing. (3 hr. lab)

BRC1059
Diversity Awareness and Customer Service
3.00 credits

This course will consist of invited speakers on selected topics to address cultural norms and values and the resulting impact on customer service in order to help individuals of different cultures become homeowners. (3 hr. lecture)

BRC2266
Affordable Housing and Community
3.00 credits

This course will cover specialized programs that provide financing opportunities to low and moderate-income households. Students will gain exposure to specific tools and techniques to facilitate homeownership, sources of funds, types of mortgages and various commu-

nity lending product and non-traditional underwriting guidelines and home buyer education and counseling. (3 hr. lecture)

BRC2267
Fair Housing and Fair Lending
3.00 credits

This course will cover the legislative policies origins of regulatory and compliance laws, designed to prohibit discriminatory practices in lending, A.S. degree credit only (3 hr. lecture)

BRC2268
Mortgage Loan Servicing and Quality
3.00 credits

This course will cover servicing of mortgage loans from the close of the loan until the final payment. The student will be provided with an in-depth study of the actual procedures required in the daily operations of mortgage loan servicing. This course will include a study of the quality control technique and an understanding of the importance of the ethics in mortgage lending. (3 hr. lecture)

BRC2353
Marketing for Financial Institutions
2.00 credits

The facts and principles of marketing are set forth in this course. Topic includes: the marketing concept and structure, marketing information and buyer behavior, consumer and intermediate customers' buying behavior, product packaging and branding decisions, consumer and industrial goods, product planning and time-place utility, channels of distribution, promotion, pricing strategy, and developing a marketing program, controlling marketing programs, and the cost-value to society. (2 hr. lecture)

BRC2941
Field Experience in Mortgage Finance
3.00 credits

Skills learned in the classroom environment are not only reinforced but become instilled in a student when opportunities in the practical work environment are presented. (3 hr. lecture)

Biochemistry

BCH3023

Introductory Biochemistry

3.00 credits

This course surveys the fundamental components of biochemistry. In this course, students will learn concepts such as the structure and function of amino acids, proteins, carbohydrates, lipids, and nucleic acids, together with discussions of oxidative metabolism and regulation. Special fee. Prerequisites: BSC 2010/L, 2011/L, CHM 2200 or CHM 2211/L. Corequisites: BCH 3023L. (3 hr. lecture)

BCH3023L

Introductory Biochemistry

Laboratory

2.00 credits

This laboratory course complements the lecture corequisite BCH 3023, which involves the study of the fundamental components of biochemistry. In this laboratory course students will learn and will be provided with hands-on experiences with the concepts addressed in the lecture course. Special fee. Prerequisites: BSC 2010/L, 2011/L, CHM 2200 or CHM 2211/L. Corequisites: BCH 3023. (3 hr. lecture)

Biological Science

BOT1010

Botany

3.00 credits

A survey of the plant kingdom based on a detailed study of the morphology, anatomy and physiology of selected representative specimens. Corequisite: BOT 1010L. (3 hr. lecture)

BOT1010L

Botany Laboratory

1.00 credits

Laboratory for BOT 1010. Corequisite: BOT 1010. Laboratory fee. (2 hr. lab)

BOT2150C

Native Plant Identification and Usage in South Florida

3.00 credits

Plants native to south Florida are identified and presented by their typical ecological community. Emphasis is primarily upon pineland, tropical hammock, mangrove and costal, Everglades marsh, and cypress swamp communities. Plants appropriate for use in urban landscapes as well as in ecological restorations are covered. A combination lecture and lab course. (2 hr. lecture; 2 hr. lab)

BOT3015

Survey of Plant Diversity

3.00 credits

This course explores the plant kingdom and gives emphasis on structure, function and genetics of plants. Students will learn the evolutionary relations hips, natural history, ecological adaptations, physiology, morphology and reproductive biology of gymnosperms and angiosperms. Prerequisites: BSC 2010, 2010L, 2011, 2011L. Corequisite: BOT 3015L. Special fee. (3 hr. lecture)

BOT3015L

Survey of Plant Diversity Laboratory

1.00 credits

This course is designed to provide the necessary laboratory experiments and dissection exercises to supplement/accompany the BOT 3015 Survey of Plant Diversity lecture course. Students will learn about the plant kingdom and with emphasis on structure, function and genetics of plants. Dissections and laboratory exercises are designed to explore the fundamental cell and tissue structures of both vascular and non-vascular plants. Prerequisites: BSC2010, 2010L, 2011, 2011L. Corequisite: BOT 3015. Special fee. (2 hr. lab)

BSC1005

General Education Biology

3.00 credits

This general education biology course covers basic biological concepts, concentrating on selected principles that help explain molecular biology, evolution, genetics, growth, disease, and the problems of

humans in the environment. It is designed to stimulate interest in the variety of life that exists on our planet, help students recognize the factors that provide order in this variety, and involve students in the processes of inquiry, observation, and analysis of biological organization in order to give them a foundation for intelligently interpreting and evaluating biological topics. (3 hr. Lecture)

BSC1005L

General Education Biology Laboratory

1.00 credits

An optional one-credit lab to provide students with experience in the scientific process. Laboratory fee. (2 hr. lab)

BSC1030

Social Issues in Biology

3.00 credits

Social Issues in Biology develops in students an understanding and appreciation for living systems (including themselves) and the skills and knowledge needed to address biological issues that are important and relative to their lives and the society in which they live. Such issues include, but are not limited to, the origin of biodiversity, advances in reproductive technology, genetic engineering, scientific ethics, advances in the treatment of disease and genetic disorders, environmental problems and sociobiology. (3 hr. lecture)

BSC1050

Biology & Environment

3.00 credits

This course provides students with an understanding and appreciation of how the natural world functions, how human attitudes and actions alter nature systems, creating environmental problems, and how sustainable approaches may resolve these problems. (3 hr. lecture)

BSC1084

Functional Human Anatomy

3.00 credits

Basic human anatomy for the students in allied health and mortuary science programs. Includes the dynamics of gross and functional anatomy, terminology, body

orientation, and systematic relationships. (3 hr. lecture)

BSC1949

Co-op Work Experience 1: BIO

3.00 credits

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. (3 hr. lecture)

BSC2010

Principles of Biology

3.00 credits

This is the first sequence of two courses that deal with the principles of modern biology. It covers scientific process, the chemistry of life, the basics of metabolism, cell theory, cellular respiration, photosynthesis, classical, and molecular genetics. Pre/corequisites: BSC 2010L, CHM 1045. Special fee. (3 hr. lecture)

BSC2010L

Principles of Biology 1 Laboratory

2.00 credits

This laboratory course is designed to complement BSC 2010, Principles of Biology 1. It covers the nature of scientific investigation, the chemistry of life, microscopy, cell structure and function, metabolism, and the continuity of life. Corequisite: BSC 2010. Special fee. (4 hr. lab)

BSC2011

Principles of Biology 2

3.00 credits

This is the second in a sequence of two courses that deals with the principles of modern biology. It covers organic evolution, phylogeny, biological diversity, overviews of plant and animal form and function, behavior, as well as population, community, and ecosystem ecology. Prerequisites: BSC 2010, 2010L; corequisite: BSC 2011L. Special fee. (3 hr. lecture)

BSC2011L

Principles of Biology Lab 2

2.00 credits

This course is intended for major's students and complements the lecture course BSC 2011. As such, it functions to provide majors students with hands-on experience with laboratory exercises designed to complement the presentation of the principles of biology as they relate to evolution, biological diversity, form and function in plants and animals, ethnology, ecology and conservation biology. Prerequisite: BSC 2010L; corequisite: BSC 2011. (4 hr. lab)

BSC2020

Human Biology: Fundamentals of Anatomy/Physiology

3.00 credits

This course provides a basic understanding of the human body, its systems and their functions. It includes the dynamics of physiology, terminology, and physiological relationships of the body systems. (3 hr. lecture)

BSC2085

Human Anatomy and Physiology 1

3.00 credits

In this course students will learn the structure and function of the systems of the human body, emphasizing those aspects most pertinent to students in the Health Sciences programs. Students are strongly recommended to complete CHM1033/1033L prior to enrolling in this course. Corequisite: BSC2085L. (3 hr. lecture)

BSC2085L

Human Anatomy and Physiology 1 Laboratory

1.00 credits

In this laboratory course, student will learn to apply the concepts covered in BSC2085 as it pertains to structure and function of the human body from an experiential approach. Corequisite: BSC2085 (2 hr. lab)

BSC2086

Human Anatomy & Physiology 2

3.00 credits

Building on concepts learned in BSC2085, students will learn the structure, function, and physiology of the human body, with an

emphasis on the Endocrine, Cardiovascular, Lymphatic, Respiratory, Digestive, Urinary, and Reproductive Systems. Prerequisite: BSC2085 Corequisite: BSC2086L (3 hr. lecture)

BSC2086L

Human Anatomy & Physiology 2 Laboratory

1.00 credits

In this laboratory course, students will learn to apply the concepts covered in BSC2086, which include the structure and function of the Endocrine, Cardiovascular, Lymphatic, Respiratory, Digestive, Urinary, and Reproductive Systems and development, from an experiential approach. Prerequisite: BSC2085L, BSC2085 Corequisite: BSC2086 (2 hr. lab)

BSC2250

Natural History of South Florida

3.00 credits

Integrates and correlates certain features of the natural history of South Florida such as its geology, meteorology, flora, fauna, ecology and conservation. (3 hr. lecture)

BSC2423C

Methods & Applications of Cell Culture & Protein Biotechnology

4.00 credits

This course addresses the basic methods and principles of cell culture and protein biochemistry necessary for an understanding of the field and effective applications of cell culture and protein biotechnology are explored with hands-on training in plant and mammalian cell culture and protein purification. Prerequisites: BSC 2427, 2427L. Laboratory fee. (3 hr. lecture; 2 hr. lab)

BSC2426

Biotechnology Methods and Applications 1

3.00 credits

This course addresses the basic principles, concepts and techniques of biotechnology necessary for an understanding of the field, and effective work in a pharmaceutical-biotechnology-and/or research laboratory setting(s). Practical applications of biotechnology are explored. Prerequisite:

Previous knowledge of chemistry and biology strongly recommended; corequisite: BSC 2426L. (3 hr. lecture)

BSC2426L
Biotechnology Methods & Applications 1 Laboratory
2.00 credits

This laboratory course is designed to complement BSC 2426 Biotechnology Methods and Applications 1. This is a hands-on course that emphasizes the basic laboratory principles, techniques, and instrumentation, necessary for effective work in pharmaceutical, biotechnology, and/or research laboratory settings(s). Prerequisite: Previous knowledge of chemistry and biology strongly recommended. Corequisite: BSC 2426. Laboratory fee. (4 hr. lab)

BSC2427
Biotechnology Methods and Applications 2
3.00 credits

This course addresses advanced principles, concepts and techniques of biotechnology necessary for an understanding of the field, and effective work in a pharmaceutical-biotechnology-and/or research-laboratory setting(s). The following areas of contemporary biotechnology are covered: forensics, bioremediation, and medical-, animal-, plant-, and marine biotechnology. Prerequisites: BSC 2426, 2426L. corequisite: BSC 2427L. (3 hr. lecture)

BSC2427L
Biotechnology Methods & Applications 2 Laboratory
2.00 credits

This laboratory course is designed to complement BSC 2427 Biotechnology Methods and Applications 2. This is a hands-on course that emphasizes advanced laboratory principles, techniques, and instrumentation necessary for effective work in a pharmaceutical, biotechnology, and/or research-laboratory setting(s). Prerequisite: BSC 2426, 2426L; corequisite: BSC 2427. Laboratory fee. (4 hr. lab)

BSC2943L
Bioscience Internship
3.00 - 6.00 credits

This internship course is a capstone for students majoring in bioscience and related programs. Students will learn to apply acquired knowledge and skills to gain experience in the bioscience workplace (144-288 hr. Internship)

BSC2949
Co-op Work Experience 2: BSC
3.00 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

BSC3930
Biological Sciences Seminar
1.00 credits

This course is designed for biological science majors. Students will gain an understanding of the broad range of career options within the biological sciences. Additionally, students will learn how to read, interpret, discuss, and cite selected examples of the scientific literature in different areas of biology. Prerequisites: BSC 2010, 2010L, 2011, 2011L. Special fee. (3 hr. lecture)

BSC4422
Biotechnology Methods and Applications - III
3.00 credits

This course will explore biotechnology as a science and its implications in modern society. Students will learn how to make well-designed and controlled experiments. Students will also demonstrate knowledge of data acquisition and interpretation. Requisites: BSC 2427, 2427L, PCB 3060, 3060L, BCH 3023, 3023L. Corequisites: BSC4422L. Special fee. (3hr. lecture)

BSC4422L
Biotechnology Methods and Applications - III Lab
2.00 credits

This course provides students with hands-on laboratory experiences to supplement the BSC4422 lecture course. Students will learn how to perform advanced molecular bio techniques that build on previous knowledge. They will perform diagnostic assays, western blots, purifications, etc and determine how to correlate findings with the basic research or clinical data. Prerequisites: BSC 2427, 2427L, PCB3060, 3060L, BCH3023, 3023L. Corequisite: BSC 4422. Special fee. (4 hr. lab)

BSC4434
Bioinformatics for Biologists
4.00 credits

The student will be introduced to the basic concepts and tools that scientists use to analyze biological information. Students will learn, through the examination of literature, development of projects and use of available web-based tools, how to store, retrieve and analyze genetic information. Prerequisites: BSC 2010, 2010L, 2011, 2011L, and PCB 3060, 3060L. Special fee. (4 hr. lecture)

BSC4940
Senior Specialty Internship
3.00 credits

This course will provide students with hands-on experience in the biological science workplace by conducting an internship. The experience readies the individual for their first position in-field. Prerequisite: Pre-completion of BS-BS core curriculum and approval by BS-BS faculty. Special fee. (3 hr. Internship)

BSC4950
Senior Capstone Research Project
3.00 credits

This course will provide students with a capstone research experience in the biological science discipline. The experience readies the individual for their first position in-field. Prerequisite: Pre-completion of BS-BS core curriculum and approval by BS-BS faculty by BS-BS faculty. Special fee. (3 hr. Capstone)

MCB2010**Microbiology****3.00 credits**

This course introduces basic principles of morphology, physiology, biochemistry and genetics of microorganisms. The students will learn representative types of microorganisms including bacteria, algae, protozoa and viruses and the roles of various microorganisms in health and disease, modes of transmission and the effects of their activities in our biosphere. Students are strongly recommended to take the laboratory component MCB 2010L. Prerequisites: BSC 2010/2010L or BSC 2085/2085L, CHM 1033/1033L or CHM 1045/1045L. (3 hr. lecture)

MCB2010L**Microbiology Laboratory****2.00 credits**

This laboratory course to accompany MCB-2010 complements lecture topics. Students will learn and have direct experience with fundamental techniques for observation, isolation, cultivation, counting, identification, and control of microbes. Prerequisites: BSC2010/2010L or BSC2085/2085L CHM1033/1033L or CHM 1045/1045L; corequisite MCB 2010. (4 hr. lab)

MCB3023**Principles of Microbiology****3.00 credits**

This course offers an introduction to the principles of microbiology. Students will learn the taxonomy, biochemistry, genetics, and ecology of microorganisms and will have an understanding of the impact of microorganisms on the advancement of the biological sciences. Prerequisites: BSC 2010, 2010L, 2011, 2011L, CHM 2211, 2211L. Corequisites: MCB 3023L. Special fee. (3 hr. lecture)

MCB3023L**Principles of Microbiology Lab****2.00 credits**

This Laboratory course accompanies MCB3023. Students will learn and have direct experience with fundamental techniques for observation, isolation, cultivation, enumeration, biochemistry, identification, genetics, and control of microbes.

Prerequisites: BSC 2010, 2010L, 2011, 2011L, CHM 2211, 2211L. Corequisites: MCB3023. Special fee. (4 hr. lab)

MCB4503**Virology****3.00 credits**

This course will cover general virology, including virus structure, replication cycles, infection and mode of transmission of human diseases. Student will learn the major families of the bacterial (bacteriophages), plant and animal viruses and how they influence infection. Prerequisites: MCB 3023, 3023L. Special fee. (3 hr. lecture)

OCB1010**Introduction to Marine Biology****3.00 credits**

An introduction to the biology of the seas. Emphasis is placed on the variety of marine organisms and their structural, physiological, and behavioral adaptations within specific marine environments. Special attention is directed to marine communities, e.g., coral reefs and shallow grass flats, and the factors limiting the distribution of organisms within those communities. Discussions will also be directed towards geological, chemical and physical characteristics of the world's oceans. (3 hr. lecture)

OCB1010L**Introduction to Marine Biology****Laboratory****1.00 credits**

An optional laboratory class for OCB 1010. This laboratory course stresses understanding, familiarization, and identification of local marine organisms and study of local marine communities through field trips to selected local marine habitats and hands-on laboratory activities. An introduction to field collection methods and various sampling techniques is presented. (2 hr. lab)

PCB2033**Introduction to Ecology****3.00 credits**

This course will provide students with an understanding of an appreciation for how organisms relate to one another and their environment at the levels of biological organization from the individual to the

biosphere. Prerequisites: PSC 1515 or BSC 2011. (3 hr. lecture)

PCB2061**Genetics****3.00 credits**

This course provides an understanding of the mechanisms of transmission of heritable information including classical principles of Mendelian genetic analysis, principles of modern genetic analysis, gene mapping change and regulation of gene expression. Quantitative genetic analysis, genomics, genetic basis of cell and cancer development will also be explored. Prerequisite: BSC 2010, 2010L. (3 hr. Lecture)

PCB3043**Fundamentals of Ecology****3.00 credits**

This is a foundations course in ecology. In this course, students will learn the basic principles of ecology at organismal, population, community, and ecosystem levels, including consideration of Florida's ecosystems and human impact on those systems. Prerequisites: BSC 2011, 2011L. (3 hr. lecture)

PCB3060**Principles of Genetics****3.00 credits**

This course is an introduction to the mechanisms of transmission of hereditary information. Students will learn the classical Mendelian principles of heredity, deviation of Mendelian principles, genetic analysis, linkage and mapping, genetics of populations, gene regulation, mutation, the genetic bases of cancer and other genetic disorders will also be studied. Prerequisites: BSC 2010, 2010L. (3 hr. lecture)

PCB3060L**Principles of Genetics Laboratory****2.00 credits**

This laboratory course is designed to complement PCB 3060 Principles of Genetics. Students will learn hands-on skills with emphasis on laboratory principles, techniques, and instrumentation within the field of genetics. Prerequisites: BSC 2010, 2010L, 2011, 2011L. Corequisites: PCB 3060. Special fee. (6 hr. lab)

PCB4023
Molecular and Cell Biology
3.00 credits

Students will learn the structure and function of cells and biological membranes, signal transduction pathways, cell cycle and cell division, the flow of genetic information and the regulation of gene expression. Exploration of laboratory techniques and discussion of the cellular basis of human diseases will also occur. Prerequisites: BSC 2010, 2010L, 2011, 2011L. Special fee. (3 hr. lecture)

PCB4097
Human Physiology
3.00 credits

The student studies the physiology of organism's major organ systems with emphasis on humans. Student will learn the principles of physics, cell biology, and anatomy in order to explain how the different organs systems work individually and in the context of the whole organism. Prerequisites: PHY 2054, 2054L, BCH 3023, 3023L, and PCB 4023. Special fee. (3 hr. lecture)

PCB4233C
Fundamentals of Immunology
4.00 credits

Students will learn the immunological processes and concepts as they pertain to human health, disease prevention, development, and treatment. Its primary emphasis is on the cellular and non-cellular components of the immune system, and the ways in which these components interact to provide immunity. This is a combination lecture and lab course. Prerequisites: MCB3023, 3023L. Special fee. (3 hr. lecture; 2 hr. lab)

PCB4674
Evolution
3.00 credits

Students will learn the theory of evolution as it pertains to different fields of modern biology including the theory of natural selection, the evidence for evolution, microevolution, speciation, macroevolution, the origin of life on Earth, major evolutionary trends, and the evolution of humans. Prerequisites: BSC 2010, 2010L,

2011, 2011L, PCB 3060, 3060L. Special fee. (3 hr. lecture)

PHI3633
Biomedical Ethics
3.00 credits

This is a foundation course in biomedical ethics and ethical theory. Students will learn to use methods of effective reasoning to apply to topics in biomedical ethics. These topics may include, but are not limited to, genetic engineering, stem cell research, human cloning, euthanasia, and clinical research ethics. (3 hr. lecture)

ZOO1010
Zoology
3.00 credits

A survey of the animal kingdom based on a detailed study of the morphology, anatomy, and physiology of selected representative specimens. Corequisite: ZOO 1010L. Special fee. (3 hr. lecture)

ZOO1010L
Zoology Laboratory
1.00 credits

Laboratory for ZOO 1010. Corequisite: ZOO 1010. Laboratory fee. (2 hr. lab)

ZOO3021
Survey of Animal Diversity
3.00 credits

This course presents zoology as a scientific discipline. Students will learn the basic principles of zoological nomenclature, taxonomy, systematics, and the basic understanding of the relationships of animals to one another, to humans, their environment and to society. Prerequisites: BSC 2010, 2010L, 2011, 2011L. Special fee. (3 hr. lecture)

ZOO3021L
Survey of Animal Diversity
Laboratory
1.00 credits

This laboratory course provides hands-on experience with the concepts covered in the lecture ZOO 3021. Students will learn the basic principles of zoological nomenclature, taxonomy, and systematic; and the basic understanding of the relationships of animals to other organisms and to one another. Prerequisites: BSC 2010, 2010L,

2011, 2011L. Corequisite: ZOO 3021. Special fee. (2 hr. lab)

Building Construction

BCN1272
Building Construction Plans
Interpretation 1
3.00 credits

Develops the students' ability to interpret working drawings. Students will learn the conventions of graphic and symbolic language used by construction professionals to communicate information on drawings. Emphasis is on architectural and structural details with limited coverage on mechanical and electrical aspects. (3 hr. lecture)

BCN1275
Building Construction Plans
Interpretation 2
3.00 credits

Plan interpretation of complex working drawings for multi-story residential and commercial buildings. Students will learn to read and understand construction working drawings, identifying structural systems and their details. Familiarity with all aspects of complex working drawings will be addressed. Prerequisite: BCN1272 (3 hr. lecture)

BCT1743
Building Construction Law
3.00 credits

The legal aspects of construction contracts and the responsibilities arising particularly from the field operations. Also includes relationship of the general contractor to owner, architect, and subcontractor; material men and mechanics lien law; bonds; labor law; and other statutes and ordinances regulating contractors. (3 hr. lecture)

BCT1750
Building Construction Financing
3.00 credits

A study of building construction financing and related contract requirements. Topics include construction loans, permanent building mortgages, construction bids and contracts, penalty and incentive provisions, progress payments and retention, escala-

tion, escalation provisions, costs extras, performance and bid bonds, company profits, cash flow, and business loans. (3 hr. lecture)

BCT1770
Building Construction Estimating Fundamentals
3.00 credits

An analysis and calculation of building construction costs. Students will learn the classification of materials, labor, and sub-contracted work into the smallest manageable units. Students will develop a simple estimate for a residential structure. Prerequisite: BCN1272. Laboratory fee. (3 hr. lecture)

BCT1771
Building Construction Advanced Estimating
3.00 credits

Estimating more advanced elements of building construction. Students will learn to calculate direct, indirect, and overhead costs, as well as prepare bid proposals and related documents for commercial buildings. Prerequisite: BCN1275, BCT1770. Laboratory fee. (3 hr. lecture)

BCT2760
Building Code Regulations
3.00 credits

The restrictions and limitations of the various agencies concerned with the building industry. Provisions of the South Florida Building Code are stressed. (3 hr. lecture)

BCT2990
CBE Building Construction Specialist
1.00 – 18.00 credits

The BCT 2990 Building Construction course is designed to assess learner mastery of the competencies and skills necessary for a successful career in the Construction Industry. It provides a foundation in pursuing a career in building inspection and quality control. The course offers a sequence of coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed for further education and careers; provides technical knowledge and skills proficiency, and includes competency-

based applied learning that contributes to the academic knowledge, occupation-specific skills, and knowledge of all aspects of the Architecture and Construction career cluster.

Business Law

BUL2131
Legal Environment
3.00 credits

Law in relation to the proper conduct of business including a consideration of the nature and sources of law, its legal environment and history. The Topics of business torts, crimes, contracts and forms of organizations are also covered. (3 hr. lecture)

BUL2241
Business Law 1
3.00 credits

Law in relation to the proper conduct of business, including a consideration of the nature and source of law, courts and courtroom procedure, contracts, sales of goods, negotiable instruments and secured transactions. Special fee. (3 hr. lecture)

BUL2242
Business Law 2
3.00 credits

Emphasis on the laws affecting agencies, the formation and operation of partnership and corporation, personal and real property, insurance, surety ship, estates and bankruptcy, and a general review of government regulations affecting usual business operations. Prerequisite: BUL 2241. Special fee. (3hr. lecture)

BUL4461
Law of International Trade
3.00 credits

Students will learn to interpret laws of international trade, licensing, and customer's regulation. This course also addresses U.S. customs regulations, classification of merchandise, application of tariff rules, duty free treatment, importing and exporting, liquidation inspection, search and seizure, and fines and penalties. In addition, the course will review the general rules and how to interpret the harmonized

tariff schedule. Prerequisites: MAN 2021 and GEB 3358. (3 hr. lecture)

Chemistry

CHM1020
General Education Chemistry
3.00 credits

This course provides the non-science major with an introductory study of the substances central to our daily lives. The students will learn the basic chemistry of nutrition, medicines, cosmetics, household cleaners and the environment. (3 hr. lecture)

CHM1020L
General Education Chemistry Laboratory
1.00 credits

This course provides the non-science major with an introductory study of the substances central to our daily lives. Students will learn the basic chemistry of nutrition, medicines, cosmetics, household cleaners and the environment in a laboratory setting. Co-requisite: CHM1020. (2 hr. Lab)

CHM1025
Introductory Chemistry
3.00 credits

This course will provide beginning students with certain basic knowledge and skills, which will enable them to be successful in the first semester of General Chemistry I, CHM 1045. The students will learn elementary principles of modern chemistry, including basic measurements, chemical bonding, chemical reactions, stoichiometry, concentration of solutions, and chemical nomenclature. Prerequisite MAT 1033. (3 hr. lecture)

CHM1025L
Introductory Chemistry Lab
1.00 credits

This course is an optional beginning chemistry laboratory course, which has been designed for those students who have little or no background in chemistry and are enrolled in CHM 1025. Students will reinforce what they learn in CHM 1025, including basic measurements, chemical bonding, chemical reactions, stoichiometry,

concentration of solutions, and chemical nomenclature. (2 hr. Lab)

CHM1033
Chemistry for Health Sciences
3.00 credits

This course emphasizes chemistry topics related to allied health. Students will learn the essentials of inorganic chemistry, organic chemistry, biochemistry and their applications to physiological functions. Pre-Corequisite: CHM1033L, MAT1033. (2 Hr. Lab)

CHM1033L
Chemistry for Health Sciences lab
1.00 credits

This course emphasizes chemistry topics related to the allied health sciences. Students will learn the essentials of inorganic chemistry, organic chemistry, biochemistry, and their application to physiological functions in a laboratory setting. Prerequisite: MAT1033 Corequisite: CHM1033 (2 hr. lab)

CHM1045
General Chemistry and Qualitative Analysis
3.00 credits

CHM 1045 is the first semester of a two-semester general chemistry course for science, premedical science and engineering students. Students will learn stoichiometry, atomic structure, completing and balancing chemical reactions, nomenclature, bonding, acid-base theories, solutions, gas laws and beginning thermodynamics. Special fee. Prerequisite: CHM1025 or a passing score on the CART exam, MAC 1105. Co-requisite: CHM 1045L. (3 Hr. Lecture)

CHM1045L
General Chemistry and Qualitative Analysis Lab
2.00 credits

CHM 1045L is the first semester general chemistry laboratory course. Students will learn to introduce the basic laboratory techniques involved in general chemistry and to re-enforce and illustrate several of the important topics in general chemistry (e.g., stoichiometry, gas laws, atomic structure, and quantitative analysis). The enroll-

ment generally consists of pre-medical, pharmacy, medical technology, physical therapy, engineering, and science majors. Prerequisite: MAC1105, CHM1025 or a passing score on the CART exam. Co-requisite: CHM 1045. (2 Hr. Lab)

CHM1046
General Chemistry and Qualitative Analysis
3.00 credits

CHM 1046 is the second course in the CHM 1045-1046 sequence. Students will learn major topics in modern chemistry including but not limited to thermodynamics, kinetics, solutions equilibria including acids, bases, and other ionic equilibria and electrochemistry. Special fee. Prerequisite: CHM1045 Corequisite: CHM1046L (3 hr. lecture)

CHM1046L
General Chemistry & Qualitative Analysis Lab
2.00 credits

CHM 1046L is the second semester general chemistry laboratory course. Students will learn the basic laboratory techniques involved in general chemistry and to re-enforce and illustrate several of the important topics in general chemistry (e.g., qualitative and quantitative analysis, equilibrium, thermodynamics, and kinetics). The enrollment generally consists of pre-medical, pharmacy, medical technology, physical therapy, engineering, and science students. Prerequisite: CHM1045L Corequisite: CHM1046

CHM1941
Principles & Techniques of Peer Tutoring in Chemistry
1.00 credits

Provides an opportunity for outstanding students with at least one semester of general chemistry to assist other students to review and clarify principles and techniques in chemistry. Provides future professionals a chance to sharpen their communication skills. (1 hr. lecture)

CHM1949
Co-op Work Experience 1: CHM
3.00 credits

This is a course designed to provide training in a student's field of study through work experience. Students are graded in the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact Cooperative Education Office to obtain registration approval. (3 hr. lecture)

CHM2124C
Survey of Quantitative Analysis
4.00 credits

This course is a one-semester combination lecture-laboratory course covering the theories, calculations, and methodologies used in analytical chemistry. Topics include mathematical treatment of data; acid-base equilibria; and Gravimetric, volumetric, and potentiometric methods of analysis. Prerequisites: CHM 1046, 1046L with a grade of "C" or better. Special fee. (2 hr. lecture; 4 hr. lab)

CHM2200
Survey of Organic Chemistry
3.00 credits

This one-semester course briefly examines the structure, synthesis, nomenclature and reactivity of selected mono-and-poly-functional organic compounds. Theories that relate the structure of organic molecules to their chemical reactivity will be presented as a unifying principle. Prerequisite: CHM1046 with a grade of "C" or higher; corequisite: CHM 2200L. (3 hr. lecture)

CHM2200L
Survey of Organic Chemistry Laboratory
1.00 credits

Experiments and exercises will be conducted to introduce students to the basic laboratory techniques that are used in organic chemistry and that re-enforce and illustrate several important topics in organic chemistry. Prerequisite: CHM 1046L

with a grade of "C" or higher; corequisite: CHM 2200. Special fee. (2 hr. lab)

CHM2210
Organic Chemistry 1
3.00 credits

In Organic Chemistry 1, students will learn about aliphatic hydrocarbons and their derivatives. Lectures are supplemented by laboratory preparation of representative compounds. Prerequisite: CHM1046 Corequisite: CHM2210L

CHM2210L
Organic Chemistry 1 Laboratory
2.00 credits

Students will learn to reinforce and illustrate topics learned in CHM 2210. Topics such as nomenclature, preparations, reactions and electronic and structural features of alkanes, alkenes, alkynes, alkyl halides, aromatic hydrocarbons and other organic compounds will be performed in a laboratory setting. Prerequisite: CHM1046L Corequisite: CHM2210 (4 hr. lab)

CHM2211
Organic Chemistry 2
3.00 credits

In organic chemistry 2, students will learn about nomenclature, preparation reactions, and electronic and structural features of alcohols, ethers, phenols, aldehydes, ketones, carboxylic acids, acid anhydrides, amides, esters, and other organic compounds. Prerequisite: CHM2210 Corequisite: CHM2211L (3 hr. lecture)

CHM2211L
Organic Chemistry 2 Laboratory
2.00 credits

Students will learn to reinforce and illustrate topics learned in CHM 2210. Topics such as nomenclature, preparations, reactions and electronic and structural features of alkanes, alkenes, alkynes, alkyl halides, aromatic hydrocarbons and other organic compounds will be performed in a laboratory setting. Prerequisite: CHM1046L Corequisite: CHM2210 (4 hr. lab)

CHM2949
Co-op Work Experience 2: CHM
3.00 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

CHM3120
Introduction to Analytical Chemistry
3.00 credits

This course requires students to examine the theories, calculations, and methodologies used in analytical chemistry. Topics include: acid-base equilibria and titrations; precipitation and complex formation; electrochemistry; oxidation-reduction; spectrophotometric analytical methods; chromatographic techniques; statistical treatment of data; and sampling methods. Prerequisites: CHM 1046, 1046L with a grade of "C" or better; corequisite: CHM 3120L. (3 hr. lecture)

CHM3120L
Introduction to Analytical Chemistry Laboratory
2.00 credits

Experiments will be performed to introduce students to various laboratory methods used to analyze and quantify representative samples. Prerequisites: CHM 1046, 1046L with a grade of "C" or better; corequisite: CHM 3120. (4 hr. lab)

CHM3610
Intermediate Inorganic Chemistry
3.00 credits

This course expands and deepens the student's knowledge of inorganic chemistry. Students will learn about bonding theories, nuclear chemistry, chemical periodicity, and metal and nonmetal chemistry. Prerequisite: CHM 2200. (3 hr. lecture)

CHS1522C
Forensic Science 1
4.00 credits

An introductory course in the principles and techniques of forensic science. Students will learn how forensic science pertains to crime scene investigation and crime laboratory analysis. (3 hr. lecture)

CHS2311C
Analytical Chemical Instrumentation
4.00 credits

An introduction to a variety of chemical instrumentation commonly employed in the chemical and pharmaceutical industries. The course will combine lecture and discussion with laboratory experiences to present the principles of instrumental analysis as well to provide extensive hands-on experience with instrumentation commonly used in the chemical and pharmaceutical industries. Pre/corequisites: CHM 2200, 2200L, 2120C or CHM 2210, 2210L, 2211, 2211L. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CHS2523
Forensic Science 2
3.00 credits

This is a continuation of Forensic Science 1. Students will learn topics which include but are not limited to: drug identification and toxicology; document analysis; death determination; soil examination methodology; forensic anthropology; tool marks and casts/impressions. Prerequisite: CHS 1522C. (3 hr. lecture)

Chinese Language

CHI1120
Elementary Mandarin Chinese 1
4.00 credits

An integrated (multi-media) approach to acquire proficiency in the basic skills of Mandarin Chinese- listening/understanding, speaking, reading, writing, and cross-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice in class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

CHI1121
Elementary Mandarin Chinese 2
4.00 credits

A continuation of Mandarin Chinese 1120. A proficiency-oriented course emphasizing the mastery of the basic skills of the language. (4 hr. lecture)

CHI2220
Intermediate Mandarin Chinese 1
4.00 credits

A continuation of CHI 1121. Students will learn Chinese language and culture through a systematic review of reading and writing skills with emphasis on oral as well as written presentations. Students will also learn the use of Chinese radicals and characters rather than pinyin. Prerequisite: CHI1121 or equivalent. (4 hr. lecture)

CHI2221
Intermediate Mandarin Chinese 2
4.00 credits

A continuation of CHI2220. Students will learn advanced grammar, together with the introduction of more complex reading materials and an increase in the number of radicals and characters. Students will also be exposed to cross-cultural awareness. Prerequisite: CHI2220 or equivalent. (4 hr. lecture)

Computer Science & Related Technologies

CAP1760
Introduction to Analytics
4.00 credits

This course is designed for students who require or are interested in basic aspects of data mining and analytics using domain-specific data. Students learn the computerized techniques by which to organize, manipulate, report, present, depict and analyze domain-specific data in order to find or otherwise derive information. Prerequisites: CGS 1060 and use of a desktop database application, or equivalent experience. Prerequisite: CG1060. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CAP1788
Introduction to Data Analytics
4.00 credits

This course offers a broad introduction to data analytics and the role it plays in modern organizations. Students will use business intelligence tools to effectively communicate findings to decision makers. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CAP2047
User Interface Design
4.00 credits

This course is for students majoring in game development. Gaining a foundational understanding of programming and the use of Adobe Photoshop or Illustrator is suggested prior to enrolling in this course. It covers designing and developing interfaces for games. Students will learn how to use different input/output hardware devices, how to create and use existing interfaces for different types of hardware, and the development process for different types of gaming systems. (3 hr. lecture, 2 hr. lab)

CAP2048
Game Development Project
5.00 credits

This capstone course is for students majoring in Game Development and Game Animation. Student's will work in cross disciplinary teams to develop a working animated game or film. Students will learn how to apply the skills and knowledge they have acquired in a real world working development environment. Pre-Req: CAP 2047 or DIG 1302, COP 1334 or DIG 1111, COP 2335 or DIG 1437, DIG 1430, DIG 1710 or DIG 1132; Pre/Co-Req: DIG 1712 or DIG 2113 (3 hr. lecture; 2 hr. lab)

CAP2761
Advanced Analytics
4.00 credits

This is an advanced course for students to review and expand the use and fundamentals of databases and database programming for implementing analytics. Students design data models and subsequently implement and use analytics and data mining techniques to derive information from domain-specific databases. The My

SQL database engine and its SQL implementation will be used. Prerequisites: CAP 1760 and CIS 1321, or equivalent experience. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CAP2920C
Game Development Project II
4.00 credits

This capstone course is for students majoring in Game Development and Game Animation. Students will work in cross disciplinary teams to develop a working 5-10 min interactive game experience. Students will learn how to apply the skills and knowledge they have acquired in a real world working development environment. Pre-Req: CAP 2048, DIG 1712 or DIG 2113. Special Fee. (3 hr. lecture 2 hr. lab)

CAP3330
Programming R for Statistics
4.00 credits

This upper division course is for students majoring in data analytics. Students will learn the R programming language and use it to perform intermediate-level statistical analysis. Techniques used in data analysis, such as analysis of variance and regression, will be emphasized. Prerequisite: STA 2023. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CAP3770
Predictive Analytics Algorithms
4.00 credits

This course is for students majoring in Data Analytics. Students will learn the fundamental algorithms used in data mining and analysis. Students will learn various methods and techniques used in data mining, clustering and classification. Prerequisite: STA2023. (3 hr. lecture; 2 hr. lab)

CAP4631C
Machine Learning for Data Analytics I
4.00 credits

This upper division course is for students majoring in data analytics. Students will learn why machine learning is crucial for data analytics and why regression analysis is a foundation of supervised machine learning. Using Python programming, students will use a variety of packages to create regression models that make predictions.

Prerequisites: COP1047C; STA3164 or CAP3330.
Laboratory fee. (3 hr. lecture; 2 hr. lab)

CAP 4633C
Machine Learning for Data Analytics II
4.00 credits

This upper division course is for students majoring in data analytics. In this second-level course, students will use the Python programming language to create additional machine learning models for classification. In addition, students will explore various applications of multi-layer neural networks. Prerequisites: CAP4613C. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CAP4744
Data Visualization
4.00 credits

This course is for students majoring in Data Analytics. Students will learn to utilize the tools and techniques required to present complex data in visually meaningful representations. Students will learn how to organize raw data, to analyze and interpret data, and to draw and present conclusions. Prerequisite: CTS3452. (3 hr. lecture; 2 hr. lab)

CAP4767
Data Mining
4.00 credits

This course is for students majoring in Data Analytics. Students will learn how to extract information from data sets, transform it into an understandable structure for further use, and apply this knowledge to solve real world business scenarios. (3 hr. lecture; 2 hr. lab)

CAP4784
Big Data
4.00 credits

This course is for students majoring in Data Analytics. Students will acquire the skills and the tools to manage Big Data. Students will learn to design and to implement cloud-based data warehouses and to manage massive amounts of data in the creation of meaningful reports. Students will also learn basic visualization techniques. Prerequisite: CTS1437 and CTS2433. (3 hr. lecture; 2 hr. lab)

CAP4910
Data Analytics Capstone
4.00 credits

This upper-division course is for students majoring in Data Analytics. Students will initiate a business-driven data analytics solutions to a real-world problem utilizing acquired skills in statistical analysis, machine learning, data mining, and data visualization. Must be taken during the last semester before graduation. Departmental approval required. Prerequisites: CAP4767, CAP4744, CAP4613C. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CAP4936
Special Topics in Data Analytics
4.00 credits

This upper division course is for students majoring in data analytics. The course centers around topics of current interest or of special interest to students or instructors. Topics or focus may vary from semester to semester. Prerequisite: Department permission. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CEN2111
C/C++ Programming for Embedded Devices
4.00 credits

This course teaches the principles of programming in the C/C++ languages for embedded devices. The student will learn how to create programs to control open source hardware for building digital devices that can sense and control the physical world around them and communicate with the Internet. Prerequisite: COP1334. (2 hr. lecture, 4 hr. lab)

CEN2212C
Introduction to Programming the Internet of Things (IoT)
4.00 credits

This course teaches the principles of programming Internet of Things devices using a computer language. The student will learn fundamental programming concepts and systematic design techniques. At the end of the course, the student will be able to write programs that control development boards, with sensors, connected to the Internet. Prerequisite: COP1334. (2 hr. lecture, 4 hr. lab)

CGS1005C
Computing Fundamentals for Entrepreneurship
4.00 credits

This interactive discovery course for non-computer majors teaches how to apply computational thinking to solve real world problems. Students will learn basic computer programming, web design, mobile application development, project management and desktop publishing through the use of case studies and scenarios that simulate real world business applications. (3 hr. lecture; 2 hr. lab)

CGS1021
Scientific Computing
4.00 credits

This course explores the specialized features of common computer desktop applications as applied to biotechnology data. Through hands-on practical assignments, students will study and practice the computerized techniques by which to organize, manipulate, report, present, depict and analyze biomolecular data and information. Laboratory fee. Corequisite: STA 2023. (3 hr. lecture; 2 hr. lab)

CGS1060C
Introduction to Computer Technology & Applications
4.00 credits

This course provides the skills required for personal, academic and professional success. Students will learn essential computer concepts and skills including mobile productivity, cloud services, security, ethics, general programming concepts, email, web, operating systems, and the use of an office suite. The course satisfies the College's computer competency requirement. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CGS1081
Introduction of Computing for the Visually Impaired
4.00 credits

This course is designed to provide students with an overview of access technology, experience using it with applications and a chance to explore the wide range of opportunities that computers can offer to people who are blind. It will cover,

the components of the computer, access technology, screen reading software, disk operating systems. DOS versus Windows, WordPerfect for DOS, and accessible software, including shareware and freeware. Prerequisite: Departmental Approval. (3 hr. lecture; 2 hr. lab)

CGS1145
Introduction to Bioinformatics
4.00 credits

This course introduces the basic concepts and techniques of Bioinformatics. Through research papers, hands-on projects and use of common computational programs, students will apply aspects of Information Technology and Computer Science in order to analyze biological/bimolecular/bioinformatics data. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CGS1501
Word-processing Applications
4.00 credits

A comprehensive course in the use of a word processor for microcomputers. The concepts, features, and commands of a word processor are applied to a variety of applications. Programming concepts will be introduced. Classes are conducted in a hands-on-lecture/laboratory environment where a microcomputer is available for each student. The content of this course will continually change to keep pace with current technology. CGS 1060 or computer experience is required. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CGS1511
Spreadsheet Applications
4.00 credits

A comprehensive course in the use of a spreadsheet for microcomputers. The concepts, features, and commands of a spreadsheet are applied to a variety of applications. Programming concepts will be introduced. Classes are conducted in a hands-on lecture/laboratory environment where a microcomputer is available for each student. The content of this course will continually change to keep pace with current technology. Computer experience is required. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CGS1540C
Database Concepts Design
4.00 credits

This course is designed for computer science majors and non-majors who require a fundamental knowledge of databases and database management systems. Students will learn how to design, implement and use databases to maintain and manipulate data. Students should have knowledge of basic computer concepts or seek faculty advisement. (3 hr. lecture; 2 hr. lab)

CGS1541
Database Applications
4.00 credits

A comprehensive course in the use of a database for microcomputers. The concepts, features, and commands of a database are applied to a variety of applications. Programming concepts will be introduced. Classes are conducted in a hands-on-lecture/laboratory environment where a microcomputer is available for each student. The content of this course will continually change to keep pace with current technology. CGS 1060 or computer experience is required. Laboratory fee. (3hr. lecture; 2 hr. lab)

CGS1560
A+ Computer Operating Systems
4.00 credits

This is a comprehensive course in the use of operating systems for microcomputers suitable for students seeking preparation for A+ operating system certification. Students will learn how to install, configure, use, manage, and troubleshoot the Disk Operating System (DOS), Microsoft Windows, and other microcomputer operating systems. Prerequisite: CGS 1060 or computer experience is required. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CGS1580
Desktop Publishing
4.00 credits

A comprehensive course in the use of desktop publishing for microcomputers. The concepts, features, and commands of desktop publishing are applied to a variety of applications. Programming concepts will be introduced. Classes are con-

ducted in a hands-on-lecture/laboratory where a microcomputer is available for each student. The content of this course will continually change to keep pace with current technology. CGS 1060 or computer experience is required. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CGS 1700
Introduction to Operating Systems
4.00 credits

This course examines the role of operating systems as the interface between the hardware, the software and the users of a computer system. It explores the concepts such as processes and threads, file systems, virtual memory, interrupt handling, virtualization and security. (3hr. lecture; 2hr lab)

CGS2091
Professional Ethics and Social Issues in CS
4.00 credits

This course is designed to provide computer science majors and others with an introduction to professional ethics & social issues in Computer Science. Students will learn theories associated with the legal, ethical, and social issues relevant to information technology, and the roles and responsibilities of computer professionals in today's technological society. Laboratory fee. (3 hr. lecture; 1 hr. lab)

CGS2108
Advanced Desktop Applications
4.00 credits

This is an advanced level course for major and non-major students who have completed CGS 1060, Introduction to Microcomputer Usage. Students will learn advanced computer skills using software applications, such as word processing, spreadsheets, database, presentation graphics, and communications and scheduling software. Students will also learn advanced file management techniques, deal with security issues, and troubleshoot hardware and software. Prerequisite: CGS1060. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CGS2172**Implementing a Commerce-Enabled Web Site****4.00 credits**

Students will learn to implement, support, maintain, optimize, and troubleshoot Web sites using Microsoft Site Server, focusing particularly on electronic commerce (e-commerce) sites. Prerequisite: COP2823 or CTS2463. Recommended Preparation: CGS2547. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CGS3763**Operating System Principles****4.00 credits**

This upper division course, for students majoring in Information Systems Technology, introduces fundamental operating system topics and includes both computer system and operating system structure. Students will learn how processes, threads, concurrent programming, interrupt handling, CPU scheduling and process synchronization, and I/O system memory management affect the system structure. Additionally, students will learn how virtual memory, deadlocks, file system, and command interpreter relate to client/server systems. Prerequisite: COP 1334. Special fee. (3 hr. lecture; 2 hr. lab)

CIS1000**Introduction to Data Processing****4.00 credits**

An introductory course for data processing majors covering the fundamentals of data processing and computer programming. Elementary programming applications are included. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CIS1321**Introduction to Systems Analysis and Design****4.00 credits**

This course introduces computer science and non-majors to fundamental skills of analysis and design of management information systems. Students learn the concept of charting, investigating, documenting and reporting using current information systems, system analysis tools and system design tools. The related concept

of management, organization, computers, information processing and the system approach are combined and applied to case studies. Prerequisites: CGS 1060. Knowledge of business accounting is recommended. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CIS 1531**Introduction to Secure Scripting****4.00 credits**

This course provides students with the knowledge and skills to: create secure scripts and programs using system shells and programming languages; implement and debug algorithms to solve problems; automate and perform administrative tasks; manage data handling, and backup and storage. (3 hr. lecture; 2 hr. lab).

CIS1949**Co-op Work Experience 1: CIS****1.00 - 4.00 credits**

This course is designed as a work experience for students majoring in computer information systems programs. Students will learn to apply the skills and knowledge that they have acquired through their program of study in a real work environment. Prerequisite: Successful completion of required program course work. Department approval required. (1- 4 hr. lecture)

CIS2322**Systems Analysis and Design Implementation****4.00 credits**

This course is designed for students majoring in computer programming. Students build on the concepts learned in CIS 1321 by applying detailed design and analysis techniques to implementing an information system. Students will learn to synthesize concepts of management, organization, computers, information processing, and the system approach to analyze case studies. Prerequisites: CGS 1060 and CIS1321. Knowledge of business accounting is recommended. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CIS 2350**Cybersecurity Analysis****4.00 credits**

This course provides students an intermediate skills-level approach to cybersecurity analysis. Students learn to identify the phases of an attack, the motivations of the adversary, the resources and techniques they use, the intended effect, or end-game, and how to mitigate threats. Topics include intrusion detection and response, analytics and advanced threat visibility. Prerequisites: CTS1120 and CTS1134. Laboratory Fee. (3 hr. lecture, 2 hr. lab)

CIS 2619**Secure Software Development****4.00 credits**

This course provides an introduction to Secure Software Development in modern languages such as Java, C and C++. Common weaknesses exploited by attackers are discussed, as well as mitigation strategies to prevent those weaknesses. Students practice programming and analysis of software systems through testing and static analysis. Prerequisite: COP2800. Corequisite: COP2805C. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CIS2900**Directed Study IT****1.00 credits**

This course is for students majoring in Information Technology. Students will complete projects and make presentations based on self-directed research and related experiences. Prerequisite: Successful completion of required program course work. Department approval required. (2 hr. lab)

CIS2949**Co-op Work Experience 2: CIS****1.00 - 4.00 credits**

This course is designed as a second-level capstone for students majoring in computer information systems programs. Students apply advanced skills and knowledge that they have acquired through their first capstone course in a real work environment. Prerequisite: CIS1949. Successful completion of required program course work. Department approval required. (1-4 hr. lecture)

CIS 3215
Ethics in CyberSecurity
4.00 credits

This course provides the study of the risk factors for digital and ethical misconduct and it explores ethics, relevant laws, regulations, policies, standards, moral, and social issues and responsibilities faced by CyberSecurity professionals. Coverage includes examination of CyberSecurity policies; Federal Laws and Authorities and International Standards; ethical and legal compliance and enforcement; business issues; contractual management of assets and liabilities; and issues involving privacy, disclosure, free speech and individual rights. Laboratory fee. (3 hr. lecture; 2 hr. lab).

CIS3360
Principles of Information Security
4.00 credits

This upper division course, for students majoring in Information Systems Technology, provides an overview of information systems security principles, practices, methods, and tools for organizational and institutional computing. Students will learn about the relationship between policy and security, the mechanisms used to implement policies, and the methodologies and technologies for assurance and vulnerability analysis and intrusion detection. Students will be required to perform security analyses, and set up protection schemes. Prerequisites: CTS 1134 or CTS 1650. Special Fee. (3 hr. lecture, 2 hr. lab)

CIS3361
Information Security Management
4.00 credits

This course covers how to manage, design, oversee and assess an organization's information security. The student will learn how to develop an information security strategy, how to write information security policies, and how to manage information risk. Other topics include security program development and management, business continuity planning and disaster recovery planning. Prerequisite: CIS3360. (3 hr. lecture, 2 hr. lab)

CIS3368
Data Security & Governance
4.00 credits

This upper division course is for students majoring in Data Analytics. Students will gain an understanding of how analytics can be applied to a variety of security-related problems across organizations. In addition, students will explore various ethical, legal, and data governance issues that affect data analysts. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CIS3510
Information Technology Project Management
4.00 credits

This upper division course, for students majoring in Information Systems Technology, covers the general aspects of project management and emphasizes the important special considerations which apply to information technology projects. Students will learn the principles, processes and practices of information technology project management, including techniques for planning, organizing, scheduling, and controlling software projects with a substantial focus on cost estimation and risk management. Special fee. (3 hr. lecture; 2 hr. lab)

CIS4204
Ethical Hacking I
4.00 credits

This upper division course introduces students to penetration testing techniques. The student will learn how to footprint, scan, and enumerate networks, how to hack web applications, wireless networks, and mobile platforms, and how to evade IDS, firewalls and honeypots. Other topics include denial of service attacks, social engineering, malware and relevant laws. Prerequisite: CIS3360. Laboratory fee. (3 hr. lecture, 2 hr. lab)

CIS4347
Information Storage Management
4.00 credits

This upper division course, for students majoring in Information Systems Technology, introduces challenges and solutions for data storage and data

management. Students will learn how to manage advanced storage systems, protocols, and architectures, including storage area networks (SAN), network attached storage (NAS), fiber channel networks, internet protocol SANS (IPSAN), iSCSI, and content-addressable storage (CAS). Prerequisite: CGS 1540. Special fee. (3 hr. lecture; 2 hr. lab)

CIS4364
Intrusion Detection and Incident Response
4.00 credits

This upper division course addresses the underlying principles and techniques for detecting and responding to current and emerging cybersecurity threats. Students will learn how to handle various types of malware, email, web, network, cloud and internal network incidents, as well as risk assessment methodologies, and policies related to incident handling. Prerequisite: CIS 3360. Laboratory fee. (3 hr. lecture, 2 hr. lab)

CIS4366
Computer Forensics
4.00 credits

This upper division course, for students majoring in Information Systems Technology, provides the student with knowledge and skills to conduct formal incident investigations. The student will learn how to collect and analyze evidence from Windows and Linux computer systems. Other topics include legal issues, evidence analysis, and report writing. Prerequisite: CIS3360. (3 hr. lecture, 2 hr. lab)

CIS4617
Knowledge Management
4.00 credits

This upper division course, for students majoring in Information Systems Technology, explores how an enterprise gathers, organizes, shares, and analyzes its knowledge in terms of resources, documents, and people skills. Students will learn how to gather, organize, refine and disseminate information needed in a small business or corporation using technical applications to house and mine the data.

Prerequisite: COP 4723. Special fee. (3 hr. lecture; 2 hr. lab)

CIS4378
Ethical Hacking II
4.00 credits

This upper division course is a continuation of Ethical Hacking I. Students will focus on how web applications, wireless networks, and mobile platforms can be hacked, and how intrusion detection systems (IDS), firewalls and honeypots can be evaded. Other topics include cloud computing security, Internet of Things (IoT) security, and cryptography. Prerequisite: CIS4204. Laboratory fee. (3 hr. lecture, 2 hr. lab)

CIS4388
Advanced Computer Forensics
4.00 credits

This upper division course is a continuation of Computer Forensics. The course examines forensics techniques necessary to investigate and analyze network traffic. The course covers packet capture and analysis, log file analysis, and flow analysis. Other topics include mobile forensics, cloud forensics, malware forensics, database forensics, and investigating email crimes and web attacks. Prerequisite: CIS 4366. Laboratory fee. (3 hr. lecture, 2 hr. lab)

CIS4891
Capstone Project
4.00 credits

This upper division course, for students majoring in Information Systems Technology, requires students to demonstrate their competence to analyze, design, develop, and test an information system in a team environment. Students will learn how to create and present an information technology (IT) solution proposal that includes: design documentation, implementation plan, and project test plan to create an operational information system. Must be taken during the last semester before graduation. Prerequisite: Departmental approval required. Special fee. (3 hr. lecture; 2 hr. lab)

CNT1512
Introduction to Wireless Networking
4.00 credits

This course provides the student with a complete foundation of knowledge for entering into or advancing in the wireless networking industry. Topics include: an introduction to wireless LANs; RF theory; spread spectrum technologies; wireless LAN infrastructure devices; antennas and accessories; wireless LAN standards; and wireless LAN organizations to link budget math, troubleshooting, and performing a site survey. This course delivers hands-on training that benefits the novice as well as the experienced network professional. Prerequisites: CGS1060 and CTS 1134. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CNT3409C
Network Security
4.00 credits

In this course, the student will be introduced to current and emerging threats to the security of computer networks, as well as tools and techniques for the prevention, detection and recovery from such attacks. Topics include firewalls, intrusion detection and intrusion prevention systems, virtual private networks, remote authentication and authorization systems, and security protocols. Prerequisite: CIS3360. (3 hr. lecture, 2 hr. lab)

CNT3526C
Wireless and Mobile Networking
4.00 credits

This is upper division course for students majoring in Information Systems Technology introduces students to wireless and mobile network architecture, protocols and technologies. The student will learn about Wireless Local Area Networks (WLANs), Wireless Personal Area Networks (WPANs) and Wireless Metropolitan Area Networks (WMANs) technologies. Other topics include antenna concepts, cellular networks, the 802.11 network architecture, and wireless security. Prerequisite: CTS1134 or CTS1650. (3 hr. lecture, 2 hr. lab)

CNT4603
System Administration and Maintenance
4.00 credits

This upper division course, for students majoring in Information Systems Technology, explores UNIX and Microsoft Windows systems and their administration and maintenance within the network setting. Students will learn how to install, maintain, and extend multi-user computer systems and how to develop administrative policies and procedures. Students will also learn how to apply troubleshooting and problem solving skills to resolve user and system issues. Prerequisite: CTS 1134 or 1650. Special fee. (3 hr. lecture; 2 hr. lab)

CNT4702
Network Design and Planning
4.00 credits

This upper division course, for students majoring in Information Systems Technology, presents network design using layering. Students will learn how to apply cabling, topology, and architecture to design systems. Students will also learn how design impacts network performance and control issues such as congestion control, error control, and contention resolution. Prerequisite: CIS 3360. Special fee. (3 hr. lecture; 2 hr. lab)

COP1047C
Python Programming
4.00 credits

This is a course in Python programming available for students at all levels. Students will learn the syntax and rules of the Python language, including how to code, compile, and execute programs. Students study program design, structured modular programming arrays, report generation, and file processing. Laboratory fee. (3 hr. lecture; 2 hr. lab).

COP1120
Introduction to COBOL Programming
4.00 credits

This is an introductory course in COBOL programming recommended for students majoring in Information Technology and Computer Information Systems. Students will learn how to design, code, compile,

and execute structured programs for business applications. Recommended preparation: CGS1060 or experience working with computers and knowledge of elementary algebra. Pre/Co-requisite: CGS 1060. Special Fee. (3 hr. lecture, 2 hr. lab).

COP1332
Introduction to Visual Basic Programming
4.00 credits

This course introduces computer science and non-major students to fundamental programming skills using the Visual Basic Integrated Development environment. Students will learn program design, the fundamentals of event driven object-oriented programming, arrays, validation of user input, and how to create menu driven programs and multiple form applications. Pre/Co-requisite: CGS1060. Knowledge of high school algebra is recommended. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP1334
Introduction to C++ Programming
4.00 credits

This course is designed for students in technology majors who require a foundation in computer programming. Students will learn the syntax and rules of the C++ language, including how to code, compile, debug and execute programs. Students will learn program design, structured and modular programming, arrays, and file processing. No previous computer courses are required although CGS 1060C is recommended. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP1670
Introduction to Computing through Mobile Application Development
4.00 credits

This course is designed for students pursuing a degree in STEM. Students will learn basic computing principles and computational thinking through the development of mobile applications. They will work in teams to develop applications for mobile computing devices using a graphical software development environment, such as App Inventor and Snap. Special fee. (3 hr. lecture; 2 hr. lab)

COP2129
Advanced COBOL Programming
4.00 credits

This is a second level course in COBOL programming recommended for Information Technology and Computer Information Systems majors. Students will learn advanced techniques of structured programming. Emphasis will be on design and execution of structured programming using various access methods. Special Fee. Prerequisite: COP1120. (3 hr. lecture, 2 hr. lab)

COP2270
"C" for Engineers
4.00 credits

This course is intended for students majoring in Computer Engineering Technology, Electronics Engineering Technology, or any engineering discipline. Students will learn the C programming language, MATLAB, and the Engineering Problem Solving Method to analyze, design, code, compile and execute programs that solve engineering related problems. Pre/Corequisite: MAC1105. Recommended Preparation: CGS1060 or knowledge of computer skills. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP2333
Advanced Programming Concepts using Visual Basic
4.00 credits

This course provides Microsoft Visual Basic developers with the knowledge and skills needed to develop Microsoft .NET-based applications using Visual Basic .NET. Students use advanced programming and object oriented tools to create enterprise applications for the .NET Platform and to create more traditional Visual Basic applications that take advantage of the enhancements to the language. Prerequisite: COP1332. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP2335
Object Oriented Programming using C++
4.00 credits

This second course in C++ programming is recommended for Computer Science and Computer Information Systems majors.

Students will learn techniques and skills of object oriented programming including object-oriented modeling, analysis, and design. Prerequisite: COP1334. Knowledge of high school algebra is recommended. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP2654
iPhone Application Development 1
4.00 credits

This is an introduction to iOS programming course using the Objective C computer language, recommended for Computer Science and Computer Information Systems majors. Students will learn to code, compile and execute mobile iOS applications while learning advanced programming concepts and object oriented programming design concepts and principles. Prerequisite: COP 1332 or COP 1334. Special Fee. (3 hr. lecture, 2 hr. lab)

COP2658
iPhone Application Development 2
4.00 credits

This intermediate iOS course teaches the principles of iPhone application development for majors in Computer Science, Computer Information Systems, and related disciplines. Students will learn how to create mobile applications that can be deployed to iPhone smartphones, tablets or simulators utilizing Cocoa and X Code for development. Emphasis will be placed on learning the underlying iPhone framework and components in order to create quality mobile applications. Prerequisite: COP 2654. Special Fee. (3 hr. lecture, 2 hr. lab)

COP2660
Android Application Development 1
4.00 credits

This course teaches the principles of Android application development for majors in Computer Science, Computer Information Systems, and related disciplines. Students will learn how to create mobile applications for deployment to Android smartphones, tablets or simulators utilizing open source software (Java, Eclipse IDE, Android Plug-In and Android SDK) for development. Emphasis will be placed on the underlying Android framework to create quality applications. Prerequisite: COP

1332 or COP 1334. Special Fee. (3 hr. lecture, 2 hr. lab)

COP2662
Android Application Development 2
4.00 credits

This course for majors in Computer Science, Computer Information Systems, and related disciplines teaches how to develop advanced Android applications. Students will learn how to create applications utilizing the advanced capabilities of Android smartphones, including interfacing the application to the devices content provider's databases, GPS and location based services, notifications, background threads, audio, video, SMS, motion sensors and network connectivity. Prerequisites: COP2660, 2800. Special fee. (3 hr. lecture; 2 hr. lab)

COP2700
Database Application Programming
4.00 credits

Current database management software is featured. Emphasis is on analysis, design, and programming of systems rather than data structures. This course is designed for individuals interested in developing programmed applications. Prerequisites: Completion of all basic skills or acceptable scores on the Placement Test, CGS 1060, (Introduction to microcomputer Usage), and proficiency in any programming language. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP2701
Advanced Database Programming
4.00 credits

Current database management is featured. Emphasis's on analysis, design, programming real world applications and integration of database and the internet applications. This course is designed for individuals interested in developing programmed database applications. Prerequisite: CTS 2433. (3 hr. lecture; 2 hr. lab)

COP2800
Java Programming
4.00 credits

This is an intermediate level programming course using the Java computer language, recommended for Computer Science and

Computer Information systems majors. Students will learn to code, compile, and execute programs while learning advanced programming concepts and object oriented programming and design concepts and principles. Prerequisite: COP 1334. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP2805
Advanced Java Programming
4.00 credits

This is an advanced level programming course using Java. Students will learn how to code, compile and execute programs. Topics include object serialization, Java Collection, sorting/searching algorithms, multithreading and networking capabilities, and Java databases. Prerequisite: COP2800. (3 hr. lecture; 2 hr. lab)

COP2812
Extensible Markup Language Programming (XML)
4.00 credits

The prospective e-commerce professional will learn the skills necessary to create applications using XML technologies. Building, maintaining, and implementing these applications allow the student an opportunity to create business-to-business web applications that solve everyday business problems. Prerequisites: CGS 1060, COP 2822, and COP 2800. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP2822
Web Page Design and Programming
4.00 credits

This is an intermediate level programming course that prepares students for web development. Students will learn client-side programming skills and technologies, such as JavaScript, XML, and Ajax. Prerequisite: COP1332 or COP1334, and CTS1800. Special fee. A.S. credit only. (3 hr. lecture; 2 hr. lab)

COP2823
ASP/Script Language Programming
4.00 credits

This course will teach Microsoft Visual Basic programmers and beginning Web developers the fundamentals of Web application development by using Microsoft ASP.NET and

Microsoft Visual Basic.NET. Students will learn how to use the Microsoft Visual Studio .NET environment and the Microsoft.Net platform to create an ASP.NET Web application that delivers dynamic content to a Web site. Prerequisites: CGS 1060 and COP 1332 or COP 1334. Laboratory Fee. (3 hr. lecture; 2 hr. lab)

COP2825
Implementing an Internet Server
4.00 credits

Students will learn to implement, support, and maintain Internet servers. Both Microsoft and Apache servers are covered. Recommended preparation: Prior knowledge of operating systems and managing network resources is recommended. Laboratory fee. A .S. degree credit only. (3 hr. lecture; 2 hr. lab)

COP2842
Developing Websites using PHP/ MYSQL
4.00 credits

This is an intermediate course for students preparing to become web developers. Students will learn to develop dynamic, interactive web sites using PHP5, an open source programming language and MYSQL database Prerequisites: COP 1332 or COP 1334. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP2843
Implementing Open-Source Databases
4.00 credits

This course is an introduction to open-source database programming for students majoring in database and internet technologies. Students will learn to use and implement MYSQL for the purpose of storing and retrieving information from the MYSQL database. In conjunction with knowledge of open-source technologies such as Linux, Apache and PHP (LAMP), students will develop highly available, dynamic, web-based applications. Prerequisite: CGS 1060. Laboratory fee. (3 hr. lecture; 2 hr. lab)

COP3530
Data Structures
4.00 credits

This upper division course is for students majoring in B.S. in Information Systems

Technology. The student will learn the fundamentals of data structures using the Java programming language. The students will learn to design, implement and use data structures to organize and store data in a computer so that it can be accessed and modified efficiently. Prerequisite: COP2800. (3 hr. lecture, 2 hr. lab)

COP4656
Mobile Applications Development
4.00 credits

This upper division course, for students majoring in Information Systems Technology, covers project-oriented development of applications for mobile computing devices. Students will learn how to develop mobile applications utilizing memory management, user interface design, user interface building, input methods, data handling, network techniques, URL loading, and GPS and motion sensing. Students will develop a project that produces a professional-quality deployable mobile application. Prerequisites: COP 2800 and 4723. Special fee. (3 hr. lecture; 2 hr. lab)

COP4723
Database Administration
4.00 credits

This upper division course, for students majoring in Information Systems Technology, builds a deeper understanding of how databases work, including topics in database theory and architecture, data modeling, query languages, and security. Students will learn the fundamentals of SQL, including how to create and maintain database objects, and how to store, retrieve, and manipulate data, and the basics of managing the database environment. Prerequisite: CGS 1540. Special fee. (3 hr. lecture; 2 hr. lab)

COP4807
Web Programming with Java
4.00 credits

This is upper division course for students majoring in Information Systems Technology introduces students to the design, implementation and testing of web-based applications using the Java language. The student will learn about the three-tier architecture, the Model

View Controller architecture, servlets, and Java Server Pages, JDBC/JPA, and Web Services. Prerequisite: COP3530. (3 hr. lecture, 2 hr. lab)

COP4834
Data Driven Web Applications (Web Administration)
4.00 credits

This upper division course, for students majoring in Information Systems Technology, utilizes modern three-tier application development to build web-based applications that use relational database systems. Students will learn how to integrate client-side and server-side scripts and database server to build a transaction processing and report generating data-driven web application system. Prerequisites: COP 1334 and 4723. Special fee. (3 hr. lecture; 2 hr. lab)

CTS1111
Linux +
4.00 credits

This course is designed to help students prepare for the CompTIA Linux+ Certification Exam and to teach the skills needed to administer GNU/Linux-based work-stations and servers. Students learn how to plan, install, maintain, document, and troubleshoot GNU/Linux operating system services. Prerequisite: CGS 1060 or computer experience is required. Special fee. (3 hr. lecture; 2 hr. lab)

CTS1120
Cybersecurity Fundamentals
4.00 credits

This course provides a foundation of knowledge in the information technology security field. The student will learn general network security concepts; compliance and operational security; threats and vulnerabilities; application, data, and host security; access control and identity management; cryptography. Hands on training benefits the novice as well as the experienced network professional. No prerequisite but prior knowledge in Networking Technologies recommended. Laboratory fee. (3 hr. Lecture; 2 hr. lab)

CTS1131
A+ Computer Essentials & Support
4.00 credits

This is an intermediate level course designed for students preparing for A+ certification as a support technician. Students will learn how to install, configure, upgrade and replace computer system components; how to troubleshoot processors, memory, storage devices, adapter cards, peripherals and other system components; how to install, configure and troubleshoot operating systems, laptops, portable devices, printers, scanners, network devices, security measures and virtualization and cloud computing; and how to provide professional IT support and customer service. Prerequisite: CGS 1560. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS1134
Networking Technologies
4.00 credits

This course will provide an introduction to the technical areas of network connectivity, data communications, and communication protocols. Emphasis on understanding the foundation of networking technologies and data communication concepts. Topics covered will include an exploration of computer networking development, the OSI reference model, data signaling, data translation, standards for communications and data transmissions, network topologies and access methods. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS1145
Cloud Essentials
4.00 Credits

This course prepares the student to demonstrate knowledge of Cloud computing from a business and technical perspective, including Cloud concepts, services, architecture, system integration, connectivity, data center migration, administration, security, and technical support. Coverage includes preparation for the CompTIA and AWS certification examinations. Corequisite: CTS1134. (3 hr. lecture; 2 hr. lab)

CTS1328
Supporting Microsoft Clients
4.00 credits

This course is intended for students preparing for IT careers as desktop and net-

work support specialists and server administrators, as well as candidates for industry certification. Students will learn how to implement and maintain a Microsoft client operating system. Prerequisite: CGS1060C or Previous Computer Experience Laboratory Fee. (3 hr. lecture; 2 hr. lab)

CTS1437
Microsoft SQL Administration
4.00 credits

This is an introductory database administration course for students majoring in Internet Services, Database Technology Microsoft Database Administrator (DBA), Computer Programming and Analysis, and for students preparing for Microsoft DBA certification exams. Students will learn to install, administer, and optimize an enterprise-level database system, and how to use SQL to define databases, tables, stored procedures, and constraints. Recommended Preparation: CGS1540 or CGS1541. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS1650
CCNA 1: Cisco Fundamentals
4.00 credits

This is the first course of the four-course Cisco curriculum that will prepare students for professional certification as a Cisco Certified Network Associate (CCNA). Students will learn networking concepts and practices, network terminology and protocols, the OSI reference model, cabling, cabling tools, routers, router and switch configurations, LAN/WAN topologies, IP addressing, and network standards. Special Fee. (3 hr. lecture, 2 hr. lab)

CTS1651
CCNA 2: Routing and Switching
4.00 credits

This is the second course of the four-course Cisco curriculum that will prepare the student for professional certification as a Cisco Certified Network Associate (CCNA). Students will learn the architecture, components and operation of routers and switches, LAN (Local Area Networks) switch protocols and operations, VLANs (Virtual Local Area Networks), network routing protocols and concepts, static and dynamic routing, router and switch configuration and troubleshoot-

ing, and IP Address services. Prerequisite: CTS 1650. Special Fee. (3 hr. lecture, 2 hr. lab)

CTS1800
Introduction to Web Page Development
4.00 credits

This introductory course covers the basics of web design and development. Students will learn about the World Wide Web, Hypertext Markup language (HTML), Extensible Hypertext Markup Language (XHTML), Cascading Style Sheets (CSS) and JavaScript using popular web authoring tools such as Dreamweaver. Students will also learn the basic functions of HTML, XHTML, CSS and JavaScript and how to develop and maintain a website. Prerequisite: CGS 1060. Laboratory fee. (3 hr. lecture)

CTS1801
Multimedia and Animation
4.00 credits

This course introduces computer science and non-majors to the tools and techniques to create multimedia and animated presentations. Students will learn how to make appropriate hardware and software decisions, how to select and use various authoring systems and tools, and how to publish their work to the Web. Prerequisite: CGS1060. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2102
Operating System Principles
4.00 credits

Students will become familiar with operating system functions and commands. Windows and UNIX operating systems are covered. Topics include file management, backup and recovery procedures, multiuser functionality, communications and establishing interfaces. Prerequisites: CGS 1060, COP 1332, and COP1334. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2153
Supporting Windows Users & Applications
4.00 credits

This is an advanced course designed to help students prepare for the Microsoft

Certified IT Professional Support Technician Certification. Students will learn how to install, configure and manage Windows applications in a networked Windows environment and how to support enterprise users. Students will also deploy Windows and applications using various methods, resolve installation and compatibility issues, establish group policies and user profiles, perform support functions, troubleshoot user and application issues, secure the desktop and network from unauthorized use, install software upgrades and updates, perform systems monitoring and documentation, and develop customer service skills. Prerequisite: CTS 1328. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2154
IT Help Desk Support
4.00 credits

This course is designed to prepare students as entry-level help desk computer support technicians. Students will learn skills needed to support computer users within the business organization and to provide exceptional customer service, including how to identify the appropriate tools, technologies, and processes to assess and meet computer user needs, essential communications skills, the IT function within the business organization, and career opportunities in computer user support. Prerequisites: CGS 1060, CGS 2108. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2215
PowerPoint/Outlook
4.00 credits

The student will be provided the opportunity to develop the skills necessary to prepare for the core level Microsoft Office User Specialist (MOUS) Certification exam in MS PowerPoint and MS Outlook. Prerequisite: CGS 1060. Laboratory fee. A.S degree credit only. (3 hr. lecture; 2 hr. lab)

CTS2300
Planning Network Infrastructure
4.00 credits

This course provides the information and skills necessary to successfully plan and maintain a Microsoft server operating sys-

tem network infrastructure. The course focuses on: planning TCP/IP physical and logical network; planning and troubleshooting a routine strategy; planning a Dynamic Host Configuration Protocol (DHCP) strategy; optimizing and troubleshooting DNS; planning and optimizing WINS; planning, optimizing, and troubleshooting IPSEC network access; and troubleshooting network access. Prerequisite: CTS 2303. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2302
Designing Network Infrastructure and Directory Services
4.00 credits

This course provides the information and skills necessary to successfully design a Microsoft server Active Directory and network infrastructure. The course focuses on the Microsoft server directory service environment, including meeting the needs of an organization for their: forest and domain infrastructure: site infrastructure; Group Policy structure; administrative structure; physical network; DHCP; network connectivity; name resolution strategy; and network access infrastructure strategies. Prerequisite: CTS 2303. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2303
Configuring Windows Servers
4.00 credits

This course is intended for the student majoring in Information Technology (IT) as network support specialists and/or server administrators. The student will learn how to implement and configure Windows Server core services. In addition, the student will be eligible for industry certification. Recommended Preparation: CGS1060C and CTS1134 or equivalent knowledge. (3 hr. lecture; 2 hr. lab)

CTS2306
Administering Windows Servers
4.00 credits

This course is intended for the student majoring in Information Technology (IT) as network support specialists and/or server administrators. The student will learn to administer the tasks required to maintain a

Windows Server infrastructure. In addition, the student will be eligible for industry certification. Recommended Preparation: CTS1134 and CTS2303 or equivalent knowledge. (3 hr. lecture; 2 hr. lab)

CTS2310
Design, Implement, Manage Network Security
4.00 credits

This course provides the information and skills necessary to design, implement, manage, maintain, and troubleshoot security in a Microsoft Windows Server network infrastructure. It is intended for students preparing to be IT systems engineers and security specialists who are responsible for implementing and managing security policies and procedures for an organization. Prepares students for the MCSE Security specialization. Pre/corequisite: CTS 2306; may be waived for individuals with current MCSA certification or equivalent experience. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2314
Network Penetration Testing and Forensics
4.00 credits

In this course, students will take an in-depth look at network defense concepts and techniques. Coverage includes network defensive concepts; policy development; problem solving; and implementation of firewalls, DMZ, VPN, IDS, NAT and proxy servers. Prerequisites: CTS1120 and CTS1134. Laboratory Fee. (3 hr. lecture, 2 hr. lab)

CTS2317
Advanced Network Security
4.00 credits

This advanced network course covers the CISSP domains for security professionals. The student will learn security and risk management; asset security; security architecture and engineering; communication and network security; identity and access management; security assessment and testing; security operations; and software development security. Prerequisite: CTS1120. (3 hr. lecture, 2 hr. lab)

CTS2320
Managing a Windows Networking Environment
4.00 credits

This course will provide the knowledge required by System and Network Administrators who implement, manage and troubleshoot existing network and server environments based on the Microsoft Windows network operating system. This course focuses on performing desktop and server installation and configuration tasks, how to perform troubleshooting tasks, hardware and software installations, configurations and upgrades, and perform network and system operation tasks. Typical network services and resources that would be managed include messaging, database, file and print servers, proxy server of firewall, Internet and intranet, remote access, and client computer management. Prerequisite: CTS 2306. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2334
Configuring Advanced Windows Servers
4.00 credits

This course is intended for the student majoring in Information Technology (IT) as network support specialists and/or server administrators. The student will learn how to perform the advanced configuration tasks required to deploy, manage, and maintain a Windows Server infrastructure. In addition, the student will be eligible for industry certification. Recommended Preparation: CTS2303 and CTS2306 or equivalent knowledge. (3 hr. lecture; 2 hr. lab)

CTS2361
SharePoint Administration
4.00 credits

This is a comprehensive course for students majoring in Internet Services, Database Technology Microsoft Database Administrator (DBA), Computer Programming and Analysis, and for students preparing for Microsoft SharePoint certification exams. Students will learn how to install, configure, and administer Microsoft SharePoint and also how to manage and monitor sites and users by using

Microsoft SharePoint. Prerequisite: CTS1437. Special fee. (3 hr. lecture; 2 hr. lab)

CTS2375C

Cloud Infrastructure and Services

4.00 credits

This course helps students develop technical expertise in Cloud computing and prepares them for Cloud computing industry certification. Students will learn the essentials of Cloud computing, business security and compliance considerations, migrating to the Cloud, architecting a Cloud server, and how to troubleshoot Cloud services. Prerequisite: CTS 1145, Corequisite: CTS 2960. (3 hr. lecture, 2 hr. lab)

CTS2404

Distributed Applications with Visual Basic

4.00 credits

This course will teach Microsoft Visual Basic programmers how to build N-tier client/server solutions for Microsoft Windows using Windows DNA and Com+ technologies. It includes developing distributed applications that conform to the Microsoft Solution Framework, and is designed to teach Visual Basic programmers, who currently develop desktop applications, how to build n-tier, client/server solutions. Also it will prepare students to take Microsoft's Certification Exam for Distributed Applications with Microsoft Visual Basic; it is a required course for MCSD and elective for MCDDBA. Prerequisites: COP 2333. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2433

Microsoft SQL Implementation

4.00 credits

A comprehensive course in learning how to design and implement enterprise database solutions using SQL. Working through a system of modular lessons and hands-on labs to comprehend SQL Architecture. Prerequisite: CTS 1437. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2440

Introduction to Oracle: SQL and PL/SQL

4.00 credits

This is an introductory level course for students majoring in the Oracle Database

Administrator and/or Solutions Developer programs. Students will learn the fundamentals of SQL and PL/SQL programming languages including the concepts of relational databases, how to create and maintain database objects, and how to store, retrieve, and manipulate data. Students will also learn to create PL/SQL blocks of application code that can be shared by multiple forms, reports, and data management applications. Prerequisite: CGS 1060. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2441

Introduction to Oracle Database Administration

4.00 credits

This course is designed to give students who are preparing to become Oracle database administrators (DBA) a firm foundation in basic administrative tasks. Students will learn through instructor-led learning, structured hands-on practices, and challenge-level exercise labs, the necessary knowledge and skills to set up, maintain and troubleshoot an Oracle database. Prerequisite: CTS 2440. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2442

Intermediate Oracle Database Administration

4.00 credits

This is the second course in Oracle database administration. Students will learn basic network administration, including techniques to backup and to recover an Oracle database. The skills developed in this class will help prepare students for the Oracle database administrator (DBA) certification exam. Prerequisite: CTS 2441 Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2444

Oracle Database Performance Tuning

4.00 credits

This course teaches students tuning steps which can be used to improve database performance. Students will learn through a combination of demonstrations, lectures, and lab exercises, gaining practical experience tuning an Oracle database. Students will also learn how to recognize, troubleshoot and resolve common perfor-

mance related problems in administering an Oracle database. Pre-requisite: CTS2442. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2450

Business Intelligence: Analysis Services and Data Mining

4.00 credits

This is one of two sources in business intelligence designed to provide students with the skills necessary for advanced web-based applications. This course provides an introduction to various data mining and business intelligence techniques. Students will learn Analysis Services and Data Mining, including database and problem-solving skills. The course focuses on how these techniques are applied in the corporate environment to better manage business processes and how data analysis is utilized to achieve business success. Prerequisite: CTS1437 or CTS2433 or CTS2451. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2451

Business Intelligence: Integration Services & Reporting

4.00 credits

This course is designed to provide students with the skills necessary for advanced web-based applications. Students will learn how to analyze business requirements to determine data access and data transfer requirements and how to apply database and problem solving skills to build data flow, design integration services, and reporting services. Prerequisite: CTS1437 or CTS2433. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2463

C# Web Application Development

4.00 credits

This course is designed to provide AS degree students majoring in computer information technology, database technology, or Internet services technology with skills necessary for web-based programming. Students will learn C# programming for ASP.NET, including database skills and problem-solving, using modular design techniques. The skills developed in this class will help prepare students for MCTS certification. Prerequisites: COP 1332 or COP 1334. Laboratory fee. (3 hr. lecture; 2 hr. lab)

CTS2466C**Internet of Things (IoT) Development with C#****4.00 credits**

This course teaches the principles of Internet of Things applications development using the C# language. The student will learn how to write programs in C# and deploy the applications to devices running Windows IoT Core. The student will also develop advanced working programs that connect the devices to cloud services. Prerequisite: CEN2211. (2 hr. lecture, 4 hr. lab)

CTS2652**CCNA 3: Advanced Routing and Switching****4.00 credits**

This is the third course of the four-course Cisco curriculum that will prepare the student for professional certification as a Cisco Certified Network Associate (CCNA). Students will learn how to create virtual local area networks (VLANs), configure inter VLAN routing, and implement wireless network access and VLAN security. Prerequisite: CTS1651. Special Fee. (3 hr. lecture, 2 hr. lab)

CTS2653**CCNA 4: Connecting Networks****4.00 credits**

This is the fourth and final course of the four-course Cisco curriculum that will prepare the student for certification as a Cisco Certified Network Associate (CCNA). Students will learn how to implement a hierarchical network design, configure wide area networks (WANs), including point-to-point and frame relay connections, implement IP addressing services such as Network Address Translation, VPN and broadband solutions, monitoring and troubleshooting enterprise networks. Prerequisite: CTS 2652. Special Fee. (3 hr. lecture, 2 hr. lab)

CTS2664**CISCO Certified Network Associate (CCNA) Security****4.00 credits**

This course is designed for students specializing in Cisco Network Security. Students

will learn how to master core security concepts, secure network infrastructure, manage secure access, recognize threats and vulnerabilities, and mitigate security threats. The course prepares students for the Cisco IINS Exam 210-260 certification. Prerequisite: CTS1651. (3 hr. lecture; 2 hr. lab)

CTS2670**Check Point Security Administration****4.00 credits**

This course, designed for students specializing in network security, prepares students for the Check Point Certified Security Administrator (CCSA) certification exam. Students will learn how to install security gateways; configure rules on servers; create a rule base; assign user permissions; schedule backups and upgrades; monitor and troubleshoot common network traffic. Prerequisite: CTS1134, CTS1120. (3 hr. lecture; 2 hr. lab)

CTS2671**Check Point Security Engineering****4.00 credits**

This course, for students specializing in network security, prepares students for the Check Point Certified Security Expert (CCSE) certification examination. Students learn how to configure, build, modify, deploy and troubleshoot a secure network utilizing firewall technologies. Topics include clustering, software acceleration, advanced VPN concepts and implementation, and monitoring and reporting tools. Prerequisite: CTS1120, CTS1134, CTS2670. (3 hr. lecture; 2 hr. lab)

CTS2823**Developing Internet Applications Using Apache****4.00 credits**

This course is designed for students who are preparing to become web developers. Students will learn to build dynamic, web-based applications using open-source technologies such as Linux, Apache, MySQL, and PHP (LAMP). Prerequisites: CTS 1111, COP 2842, COP 2843. Laboratory Fee. (3 hr. lecture; 2 hr. lab)

CTS2960**Cloud Computing Capstone****4.00 credits**

This course requires students to demonstrate their competence to analyze, design, develop, and test a cloud based complex system. Each student will create and present a cloud based solution proposal that includes: design documentation, implementation plan, cloud resources required, projected cost analysis, basic security plan and project test plan to create an operational cloud based system solution. Must be taken during the last semester before graduation and with a departmental permission. Prerequisite: Departmental Approval. (3 hr. lecture, 2 hr. lab)

CTS3452**Business Intelligence****4.00 credits**

This course is for students majoring in Data Analytics. Students will learn how to organize, manage and analyze massive amounts of data on servers. Students will learn how to create reports and present information to optimize business decisions and performance. (3 hr. lecture; 2 hr. lab)

DIG1111**Digital Character Design****3.00 credits**

This course, for students majoring in Animation and Game Art, covers the observation and translation of three-dimensional form into two-dimensional drawings. The student will learn the interpretation of the human body, based on major masses organized by gestural lines. The student will create original characters and create design elements to support them. Students will transition to draw on digital tablets. Knowledge or proficiency in Adobe Photoshop recommended. (1 hr. lecture, 4 hr. lab)

DIG1132**Digital art and Design****3.00 credits**

This course is for students majoring in Animation and Game Art and introduces environmental design. Students will learn the concepts, hardware, and software related to digital image acquisition, image

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editing, manipulation, color management basics, masking, layering, retouching, scanning and output, and color theory as it relates to digital media. Knowledge or proficiency in Adobe Photoshop and Illustrator recommended. (2 hr. lecture, 2 hr. lab)

DIG1302 **3D Modeling** **4.00 credits**

This course, for students majoring in Animation & Game Art introduces students to the basic tools, techniques and applications for feature 3D animation and game development. Students will learn how to manipulate objects, build models, employ lighting, design movement, work with materials and textures and render a final image. (3 hr. lecture; 2 hr. lab)

DIG1430 **Storyboarding** **3.00 credits**

This course is for students majoring in Animation and Game Art. It introduces the necessary tasks in the storytelling phase of an animation project. Students will learn how to develop and design visual storyboards and how to sell their storyboard ideas. Prerequisite: DIG 1437 with a minimum grade of "C" or higher. (1 hr. lecture; 4 hr. lab)

DIG1437 **Narrative Storytelling** **3.00 credits**

This course is for students majoring in Animation and Game Art. It introduces the conceptual structure and design of visual storytelling. Students will learn principles of animation, mechanics, cinematics, character development, structure of story and adapting movement for the animation medium. (2 hr. lecture, 2 hr. lab)

DIG1705 **3D Programming 1** **4.00 credits**

This course, provides students with a foundation in 3D programming which will allow them to develop programs using popular graphics libraries such as DirectX, OpenGL, and GLSL. Gaining a strong foundation in math (including advanced concepts of

algebra and vector math) is suggested prior to enrolling in this course. Students will learn basic image processing, geometric transformations, geometric modeling of curves and surfaces, 3D viewing, shaders, and ray tracing. Prerequisite: COP2335 and MAC1105. (3 hr. lecture, 2 hr. lab)

DIG1710 **Introduction to Game Development** **4.00 credits**

This course is an introduction to the computer game design and development industry. Gaining strong foundational writing skills and a knowledge of word processing and presentation software is suggested prior to enrolling in this course. Students will learn about game development careers, game development and design processes, marketing themes, copyright laws, game company structures, programming languages used by different types of games, the impact of video games on modern society, general programming concepts, how to create game design documentation, and how to use common game development environments. (3 hr. lecture, 2 hr. lab)

DIG1712 **Level Building & Design** **4.00 credits**

This is a core course for students majoring in game development and design. Gaining a good foundation in math is suggested prior to enrolling in this course, a basic understanding of vector math and advanced concepts in algebra is preferred. Students will learn how to develop game environments in industry standard engines, how to create documentation to plan out effective game play experiences, and the requirements to create virtual worlds. Prerequisite: CAP2047, COP2335, and DIG1430. Special Fee. (3 hr. lecture 2 hr. lab)

DIG1772C **Introduction to Virtual & Augmented Reality Technologies** **3.00 credits**

This course introduces students to basic concepts, history and tools commonly used for stereoscopic image acquisition and immersive technologies. Students will

learn origins of Virtual Reality (VR) and its current role in the industry, its applications and opportunities and how to generate and manipulate VR imagery. Prerequisite: CGS1060C. (2 hr. lecture 2 hr. lab)

DIG1729C **Game Engines** **4.00 credits**

This course is an introduction to game engines and their uses. Students will learn the basic techniques for creating interactive applications and how these techniques can be used for Virtual Reality (VR) and Augmented Reality (AR) projects. Prerequisite: CGS1060C. (2 hr. lecture 4 hr. lab)

DIG2113 **Post Production & Editing** **4.00 credits**

This course, for students majoring in Animation & Game Art, equips students with skills required in post-production editing. Students will learn how to combine computer-generated imagery with matte painting and backgrounds and the core principles of proper compositing, color correction, and editing. Prerequisite: DIG1437 (3 hr. lecture; 2 hr. lab)

DIG2304 **Character Animation 3** **3.00 credits**

This course, for students majoring in Animation & Game Art, equips students with the skills needed to create animated characters. Students will learn depth character design, development, rigging, and animation techniques, how to create segmented and solid model mesh of bipeds and quadrupeds, and techniques used to create facial expressions and lip syncing. Prerequisite: DIG2790 (2 hr. lecture 2 hr. lab)

DIG2318 **Animation Studio 1** **3.00 credits**

This course is for students majoring in Animation and Game Art. Students will learn to design and implement a project involving computer animation, game production, VFX or scientific/architecture visualization. Students will work in col-

laboration with faculty and industry mentors. Prerequisite: DIG1430, DIG1302 Pre/ Corequisite: DIG2113 (1 hr. lecture; 4 hr. lab)

DIG2319
Animation Studio 2
3.00 credits

This is a capstone course for students majoring in Animation and Game Art. Building on skills learned in Animation Studio 1, students will learn enhanced skills in the areas of 3D modeling, texturing, lighting, and animation. Working in groups, students develop a project plan and produce a short, 3D animated movie. (2 hr. lecture 2 hr. lab)

DIG 2370
Character Modeling & Rigging
4.00 credits

This course focuses on the modeling and rigging of characters for performance. The student will solve complex issues of character articulation with an emphasis on skeleton, skin, and binding techniques. Prerequisite: DIG 1302. (4 hr. lecture)

DIG2391C
Animation Studio 3
4.00 credits

This is a capstone course for students majoring in Animation and Game Art. Students develop a project plan and produce a short, 3D animated movie. Students also create a website for the project, social media and market campaigns, and submit the short animated movie to festivals. Prerequisite: CAP 2920C or DIG 2318. (3 hr. lecture; 2 hr. lab)

DIG2396C
Motion Capture
4.00 credits

This course is for students majoring in Animation and Game Art. Students will learn to digitize motion and clean-up and editing techniques. They will also learn how to set up motion capture and shooting, data tracking, skeleton retargeting, as well as animation correction and enhancements. Prerequisite: DIG1302. (3 hr. lecture; 2 hr. lab)

DIG2625
Network Programming for Game Development
4.00 credits

This course is for students majoring in game development. It introduces network programming and communication in a distributed computing environment for game development. Students will learn network technologies, architecture, protocols, programming across different environments. Prerequisite: COP2335 (3 hr. lecture; 2 hr. lab)

DIG2626
Artificial Intelligence
4.00 credits

This course covers key aspects of Artificial Intelligence (AI) for students majoring in game development. Gaining a strong foundation in math (including advanced concepts of algebra and vector math) is suggested prior to enrolling in this course. Students will learn the origins and history of Artificial Intelligence, current and future uses of AI, AI methods algorithms such as: path planning, stimulus-response agents, agent architectures, decision-making systems, game trees, neural networks, and genetic algorithms. Students will create and modify existing games to include an AI system. Pre/Corequisite: COP1334 (3 hr. lecture; 2 hr. lab)

DIG2717C
Game Systems Design
4.00 credits

This is a core course for students majoring in game development and design. Gaining a strong foundation in college level algebra and the use of spreadsheet software (such as Excel) is suggested prior to enrolling in this course. Students will learn how to develop game systems like combat, economy, and social. They will learn how to model and test systems before incorporating them into development, and how to use probability to create more interesting gameplay. Prerequisite: DIG1710, DIG1712, and MAC1105. Special Fee. (3 hr. lecture 2 hr. lab)

DIG2771
3D Programming 2 - Virtual Reality
4.00 credits

This course is for students majoring in game development and covers key aspects of advanced 3D programming. Students will learn how to program special effects and create realism for games by using: illumination, shading, reflections, collision detection/ reaction, light mapping, sound, music, alpha blending, fog, and applying basic Newtonian physics to objects. Prerequisite: DIG1705 Pre/Corequisite: COP2335 (3 hr. lecture; 2 hr. lab)

DIG2776C
Virtual Reality Platform Development
4.00 credits

Students will learn the fundamentals of Virtual Reality (VR) gaining practical experience using state of the art technology. This course mixes together knowledge from a variety of correlated topics, including computer graphics, tracking systems, and perceptual psychology. Prerequisite: DIG1729C, DIG1772C. (2 hr. lecture 4 hr. lab)

DIG277C
Augmented Reality Platform Development
4.00 credits

This course provides a comprehensive curriculum that targets the key areas of augmented reality (AR). Students will learn how to enhance real life objects and environments with digitally generated image overlays. Prerequisite: DIG1729C, DIG1772C. (2 hr. lecture 4 hr. lab)

DIG2790
Texturing & Environment Design
4.00 credits

This course is for students majoring in Animation & Game Art. Students will learn advanced 3D animation job skills used in creating 3D feature animation and game development, including advanced texturing, lighting and rendering a final image. Prerequisite: DIG1302 (3 hr. lecture 2 hr. lab)

Criminal Justice_& Related Technologies

CCJ1010

Introduction to Criminology

3.00 credits

Theories and causes of criminal and delinquent behavior, including its variations, ramifications, explanations and measures of prevention, control and treatment. (3 hr. lecture)

CCJ1020

Introduction to Criminal Justice

3.00 credits

History, development, philosophy, constitutional aspects, introduction to and survey of the agencies and processes involved in the administration of criminal justice in a democratic society. (3 hr. lecture)

CCJ1191

Human Behavior in Criminal Justice

3.00 credits

Human behavior and how it relates to the duties and responsibilities of the criminal justice practitioner. (3 hr. lecture)

CCJ1949

Co-op Work Experience 1: CCJ

3.00 credits

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

CCJ2053

Criminal Justice Ethics and Professionalism

3.00 credits

This course will provide students with an overview of moral, ethical, and professional issues and dilemmas facing individuals and organizations within the criminal justice system. Students will learn to define and implement ethical and professional standards by

examining what they will be confronted with and how to respond appropriately. Prerequisite: PHI 2604. (3 hr. lecture)

CCJ2358

Criminal Justice Reporting

3.00 credits

This course prepares students through instruction and practice to properly prepare written reports common to the criminal justice community. Students will learn a variety of criminal justice scenarios presented and students will be instructed as to proper report format and presentation. Prerequisite: ENC 1101 (3 hr. lecture)

CCJ2650

Narcotics and Drug Education

3.00 credits

The general problems created by illegal use of narcotics and dangerous substances, with emphasis upon classification, description and history of drugs, etiology of addiction, extent of drug use and its relationship to criminal behavior and methods of control. (3 hr. lecture)

CCJ2760

Cannabis Policy & Regulation

3.00 credits

In this course students will gain knowledge of the history, the control, and the regulations of cannabis as a recurring legal and social problem. Course completion will result in an understanding of the changing state-level law reforms, the ability to analyze the consequences of new legal, political, and practical issues, with a particular focus on the implications and impact of Florida's new cannabis laws. Students will examine the social and historical backdrop of cannabis usage and regulation, and will assess the reforms and debates impacting the control and regulations of cannabis distribution and use in Florida. (3 hr. lecture)

CCJ2949

Co-op Work Experience 2: CCJ

3.00 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by stu-

dent and employer. Prerequisite: Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

CCJ3032

Crime and the Media

3.00 credits

An examination of the inter-relationship among the mass media, crime, and criminal justice. Includes media and the social construction of crime and criminal justice; media effects on attitudes toward crime and justice; and media as a cause of crime. (3 hr. lecture)

CCJ3663

Female Crime and Delinquency

3.00 credits

A study of females in society and the criminal justice system. Includes the female delinquent, females as criminals, females as victims, and the impact of females as professionals in the Criminal Justice System. (3 hr. lecture)

CCJ3666

Victimology

3.00 credits

A comprehensive study of victimization; analysis of contemporary victim-assistance and victim compensation programs and related research; review of the historical importance of victim restitution as a basis for punitive criminal law. (3 hr. lecture)

CCJ3700

Methods of Research in Criminal Justice

3.00 credits

Evaluates the application of research methodologies as applied to the study of Public Safety Management. (3 hr. Lecture)

CCJ4054

Ethics in the Criminal Justice System

3.00 credits

An in depth study of moral, ethical, legal, and professional issues and dilemmas facing individuals and organizations within the Criminal Justice systems. (3 hr. Lecture)

CCJ4450
Criminal Justice Administration
3.00 credits

An analysis of leadership styles, management principles, supervisory techniques, policies and procedures within Law Enforcement agencies. (3 hr. Lecture)

CCJ4641
Organized Crime
3.00 credits

An analysis of organized crime in today's society, as well as, past, present, and future perspectives of the topic. (3 hr. Lecture)

CCJ4651
Drugs and Crime
3.00 credits

An analysis of the interrelationship among drug usage, crime and the criminal justice system. (3 hr. lecture)

CCJ4660
Crime, Violence, and Schools
3.00 credits

An examination of comprehensive and proven theoretical models of explaining, predicting, and preventing school-based violence. (3 hr. lecture)

CCJ4678
Race, Gender, Ethnicity & Crime
3.00 credits

Focuses on the challenges and controversies of managing and treating special offender populations such as juvenile, elderly, disabled, mentally ill, pregnant inmates, etc. (3 hr. lecture)

CJC1000
Introduction to Corrections
3.00 credits

A comprehensive view of the historical and philosophical treatment programs and developments in the field of juvenile and adult corrections. Emphases on understanding the offender in the correctional system; an examination of the correctional client, the non-institutional correctional systems, agencies and recidivism. (3 hr. lecture)

CJC1005
Operations & Procedures in Correctional Institutions
3.00 credits

A basic survey of the operational routines that prevail in correctional facilities and the procedures used by officers in upholding these routines. The focus is on the preliminary knowledge needed by correctional officers before they can acquire the skills and techniques to perform job-related tasks. (3 hr. lecture)

CJC1162
Parole and Probation
3.00 credits

The history, current practices and the consideration of philosophical concepts in the areas of probation and parole. (3 hr. lecture)

CJC2301
Interpersonal Skills for Correctional Officers
3.00 credits

The interpersonal skills needed by officers to understand the incarcerated society is explored, with emphasis on supervision methods. Inmate adjustment and the various segments of inmate society are studied. This course is limited to School of Justice students only. (3 hr. lecture)

CJC2350
Correctional Operations
3.00 credits

The operation of correctional facilities is studied including the intake of new inmates, all aspects of their daily care, and institutional procedures. This course is limited to School of Justice students only. (3 hr. lecture)

CJC4163
Advanced Probation & Parole
3.00 credits

A study of the process in which a convicted person can be released into society by means of probation or parole. (3 hr. lecture)

CJC4310
Correctional Theory
3.00 credits

An analysis of corrections relative to punishment and rehabilitation strategies uti-

lized at penal institutions throughout the United States. (3 hr. Lecture)

CJC4311
Contemporary Issues and Trends in Corrections
3.00 credits

Focuses on and analyzes of major changes in incarceration philosophies and policies, prison populations, and operational costs. (3 Hr. Lecture)

CJC4351
Correctional Operations
3.00 credits

Focuses on challenges the correctional staff faces in their critical role in the day-to-day operations of a correctional facility. (3 hr. lecture)

CJE1003
Career Exploration in Criminal Justice
1.00 - 3.00 credits

To provide an overview of the various careers in criminal justice, and to help students define their career interests and physical abilities. (1-3 hr. lecture)

CJE1640
Crime Scene Technology 1
3.00 credits

This is an introductory course in Crime Scene Technology. Students will learn the techniques, materials and instrumentation used in securing, searching, recording, collecting, and examining physical evidence. There will be special emphasis on the tools, instruments, and techniques used in the studies of crime scene reconstruction, fingerprint, firearms, tool marks, and blood stain pattern analysis. (3 hr. lecture)

CJE1642
Crime Scene Technology 2
3.00 credits

This course covers advanced principles, theories and applications in crime scene technology. Students will learn specialized collection procedures of weapons, arson, gunshot residue, blood spatter, and recovery of buried bodies and surface skeletons are also included. Data analysis, reporting and plan of action development are emphasized. Prerequisite: CJE 1640. (3 hr. lecture)

CJE1673
Crime Scene Photography 1
3.00 credits

This is an introductory study of the history of photography including basic photography skills. Students will learn camera operations, exposure control, relational photographs and flash control for crime scene and evidentiary documentation. (3 hr. lecture)

CJE1680
Introduction to Computer Crimes
3.00 credits

This course provides the student with an overview of crimes involving the use of computer technology and the internet. The course will cover computer related crimes, how they are committed and investigated, computer crime scene management, and the legal issues involved in the prosecution of computer crimes and legislation enacted to protect the public. (3 hr. lecture)

CJE1772
Crime Scene Photography 2
3.00 credits

This course expands upon concepts; knowledge and skills taught in Crime Scene Photography 1. Students will learn to include specialty light sources, darkroom techniques and procedures, filters and specialized equipment including black and white and color enlargers. Prerequisite: CJE 1673. (3 hr. lecture)

CJE2302
Management of Police Functions
1.00 - 3.00 credits

The administration of line activities of law enforcement agencies, with emphasis on the patrol functions and the prevention of crime, including traffic, investigations, juvenile, vice, and other specialized units. (1-3 hr. lecture)

CJE2400
Criminal Justice and the Community
1.00 - 3.00 credits

A general orientation to the concepts of criminal justice and community relations. Group relations for criminal justice personnel. A survey of the field of criminal justice and community relations, emphasizing the

role and influence in the management and resolution of conflict. (1-3 hr. lecture)

CJE2600
Criminal Investigation
3.00 credits

Fundamentals of criminal investigation, theory and practice, including crime scene search; preservation, collection and transportation of physical evidence interviewing, interrogating; statement taking; and case preparation, with investigation of specific offenses; relationship with the police science laboratory. (3 hr. lecture)

CJE2601
Law Enforcement Investigations for Police Officers
3.00 credits

Fundamentals of criminal investigation, theory and practice, including crime scene search, preservation, collection and transportation of physical evidence are topics included in this course. Techniques are developed from the initial observation methods through the processing of the crime scene and case preparation. Florida's computer network is studied as an information source. This course is limited to School of Justice Basic Law Enforcement students only. (3 hr. lecture)

CJE2644
Crime Scene Safety
3.00 credits

This course provides the fundamentals of protecting and preserving the crime scene and identifies the essential techniques of properly handling physical evidence. Students will learn the understanding of various hazards and safety issues and provides basic techniques for preserving evidence as it relates to various hazardous chemical and biological materials. (3 hr. lecture)

CJE2671
Basic Fingerprinting
3.00 credits

This course provides a foundation in basic fingerprinting. Students will learn topics which include classification, identification, filing and rolling of fingerprints, problems and practices associated with post mortem

fingerprinting and proper presentation of fingerprint evidence. (3 hr. lecture)

CJE2672
Fingerprint Development
3.00 credits

This course provides a continuation of CJE 2240 Basic Fingerprinting. Students will learn different methods involved in detection, enhancement, and recovery of latent fingerprints. Techniques will involve chemical and mechanical methods on substrates and evaluation for proper application in both theory and practices. Prerequisite: CJE 2671. (3 hr. Lecture)

CJE3110
Law Enforcement Systems
3.00 credits

An analysis of the different law enforcement systems in Criminal Justice. Focuses on the different law agencies and their mission at the local, state, and federal levels. (3 hr. lecture)

CJE3115
Police and Society
3.00 credits

Identifies police roles and philosophies, the nature of police work, community policing, and the debates pertaining to police discretion, community relations, and police misconduct. (3 hr. lecture)

CJE3444
Crime Prevention
3.00 credits

Provides students with strategies of how to develop, implement and maintain a crime prevention program. Includes the history of crime prevention, homeland security programs, public speaking, media relations, crime against the elderly, sexual assault programs, youth crime prevention, and telemarketing fraud and scams. (3 hr. Lecture)

CJE3574
Interpersonal Communications for Law Enforcement
3.00 credits

An examination of the communication process and how it affects the relationship between the police and the people they serve. (3 hr. lecture)

CJE4310
Police Administration
3.00 credits

An analysis of corrections relative to punishment and rehabilitation strategies utilized at penal institutions throughout the United States. (3 hr. lecture)

CJE4615
Advanced Criminal Investigations
3.00 credits

The understanding, interpretation, and application of criminal investigative procedures in the U.S., based upon constitutional issues and legal precedent. (3 hr. lecture)

CJE4647
Advanced Crime Scene Technology
3.00 credits

An application of crime scene investigation techniques to include recording, preserving, and documenting a crime scene. (3 hr. lecture)

CJE4648
Crime Scene Safety
3.00 credits

A study of how to properly handle crime scenes and hazardous crime scenes relative to various hazardous materials, to include chemical and biological. (3 hr. lecture)

CJE4650
Advanced Crime Scene Investigations
3.00 credits

A study of advanced search techniques, crime scenes reconstruction, computer sketching, laser mapping. DNA evidence, trajectory, and blood spatter evidence. (3 hr. lecture)

CJE4668
Computer Crime
3.00 credits

Synthesizes knowledge of crime elements, legal issues, investigative techniques, and computer skills used in the prevention and investigation of computer-generated crime. (3 hr. lecture)

CJE4675
Modern Fingerprint Technology
3.00 credits

A study of the detection, preservation, and removal of fingerprint evidence pertaining to latent, patent, and plastic prints. (3 hr. lecture)

CJJ2002
Juvenile Delinquency
3.00 credits

An analysis of the theories and causes of juvenile delinquent behavior. The role of the three components of the juvenile justice system (Police, Court, Corrections) and their impact on prevention and rehabilitation. (3 hr. lecture)

CJL1000
Street Law
3.00 credits

This course will cover the evaluation, debate, and critical analysis of law and legal issues that affect individuals, their families, and communities. Students will learn about practical aspects of civil, criminal, constitutional, family, immigration, and consumer law in a diverse society with an orientation toward civic involvement in the local community. (3 hr. lecture)

CJL1100
Criminal Law
3.00 credits

Historical background and foundations of American criminal law, including United States Constitutional requirements, Federal and State court organization and jurisdiction, criminal law basics, Florida statutes, rules of evidence and procedure. (3 hr. lecture)

CJL2062
Constitutional Law and Legal Procedure or Evidence
3.00 credits

An examination of the United States and Florida Constitutions, with emphasis on leading cases dealing with arrest, search and seizure, confessions and the rules of evidence. (3 hr. lecture)

CJL2100
Criminal Procedure & Evidence 1
3.00 credits

This course explores the history, principles and applications of criminal law procedures for criminal justice officers. This course is limited to the school of justice students only. (3 hr. lecture)

CJL2130
Criminal Procedure and Evidence
3.00 credits

Criminal Procedure and Evidence as they relate to the law enforcement profession will be examined. Constitutional provisions applicable to arrest, search and seizure, and interrogation will be covered. In addition, evidentiary principles will be taught emphasizing those provisions applicable to law enforcement. (3 hr. lecture)

CJL2610
Courtroom Presentation
3.00 credits

This course introduces students to proper courtroom presentation and procedures. Students will learn the appropriate techniques for proper attire, grooming, speaking, listening and stress control during courtroom proceedings, visual aid preparation, and presentations of all evidence (commonly referred to as "scientific evidence") collected at the crime scene are also included. (3 hr. lecture)

CJL3044
Civil Law
3.00 credits

A study of civil liability for damages caused by breach of an imposed duty, which includes intentional torts, negligence, strict liability, product liability, civil nuisance, defamation, civil wrongful invasion of privacy, and damages. (3 hr. lecture)

CJL3564
Judicial Policy Making
3.00 credits

An analysis of the components, policies, and procedures of the court structure of the United States and various components. An analysis of local, state, and federal courts in the Criminal Justice System. (3 hr. Lecture)

CJL4064**Corrections Administration & Law
3.00 credits**

An overall view of the nature, philosophy, operations and goals of secure and non-secure correctional institutions and programs. (3 hr. lecture)

CJL4133**Criminal Evidence
3.00 credits**

A study of evidentiary principles and rules of evidence, and their application in a courtroom setting. (3 hr. lecture)

CJL4170**Corrections Legal System
3.00 credits**

An analysis of contemporary legal decisions regarding the rights and responsibilities of prisoners, correctional administrators, and correctional officers. (3 hr. lecture)

CJL4514**Criminal Sentencing
3.00 credits**

An examination of the various pre-trial and post-trial community based treatment and supervision programs. (3 hr. lecture)

DSC1002**Terrorism
3.00 credits**

This course is a study of domestic and international terrorism as it relates to domestic security. Through focused topics, students will learn about terrorist organizations and motivations, investigating terrorism threats, conducting vulnerability assessments of potential terrorist targets, and the role of government agencies in response to a terrorist incident and recovery afterwards. (3 hr. lecture)

DSC1006**Introduction to Homeland Security
3.00 credits**

This course will introduce students to the vocabulary and important components of Homeland Security. Students will learn about the agencies associated with Homeland Security and their interrelated duties and relationships. (3 hr. lecture)

DSC1590**Introduction to Intelligence Studies
3.00 credits**

This course will provide a comprehensive overview of intelligence for the purpose of national security for the entry-level intelligence practitioners and beginning students. The student will learn security issues, define critical terms and review the history of intelligence as practiced in the United States. (3 hr. lecture)

DSC1700**Introduction to Emergency
Management
3.00 credits**

This course focuses on the philosophical and theoretical underpinnings of the emergency management profession, and the principles that define effective practice. The student will learn the current definitions of emergency management, including the mission and vision of the profession. (3 hr. lecture)

DSC2242**Transportation and Border Security
3.00 credits**

This course introduces students to global supply chains and intermodal transportation systems. Students will learn the threats to these systems, their vulnerabilities and potential for terrorist attacks, and the measures being undertaken to secure them. (3 hr. lecture)

DSC2501**Writing & Reporting for the
Intelligence Community
3 credits**

This course will provide a focused review and practice for effective writing within the intelligence community. The student will learn the basic elements necessary for effective writing in any situation or any type of report specifically within the intelligence community. Prerequisite: ENCT101. (3 hr. lecture)

DSC2590**Intelligence Analysis and Security
Management
3.00 credits**

This course examines intelligence analysis and its indispensable relationship to the security management of terrorist attacks,

man-made disasters and natural disasters. Students will learn substantive issues regarding intelligence support of Homeland Security measures implemented by the United States and explore how the intelligence community operates. (3 hr. lecture)

DSC4012**Terrorism
3.00 credits**

A study of domestic and international terrorism, using current events and past incidents for analysis, to include the events, the responses, and the outcomes. Prerequisite: CCJ 1020. (3 hr. lecture)

DSC4014**Domestic & International Terrorism
3.00 credits**

A study of the causes and effects of domestic and international terrorist events. (3 hr. lecture)

DSC4214**Catastrophic Event Response
Management
3.00 credits**

An analysis and evaluation of domestic and international terrorism, the events, the responses, and the outcomes. (3 hr. lecture)

DSC4215**Emergency Planning & Security
Measures
3.00 credits**

A study of empirical vs theoretical approaches; human behavior in disasters; myths and realities; group disaster behavior; community social systems, and disaster; cultures, demographics and disaster behavior distinctions; and model-building in sociological disaster research. (3 hr. lecture)

FES4003**Public Policy in Emergency
Management
3.00 credits**

An exploration of public policy used in emergency management, including how policy is made and conveyed. (3 hr. lecture)

FES4823**Integrated Emergency Management Planning Systems****3.00 credits**

An analysis of technology applications and its role in emergency planning, responses, recovery, and mitigation. (3 hr. lecture)

SCC1000**Introduction to Security****3.00 credits**

Students will explore and learn various aspects of security, including community retail, corporate, business and industrial problems and concerns. In addition, to legal elements as it pertains to crime prevention in a commercial environment. (3 hr. lecture)

SCC2020**Problem Solving in Security****3.00 credits**

This course provides the student with an overview of problem solving concepts within the field of private security. Students will examine and learn the critical processes underlying problem solving and the application of the process through the use of scenarios. The scenarios encompass a wide range of private security problems and venues that require the student to conduct risk analysis, propose viable solutions, and evaluate the utility of those initiatives. (3 hr. lecture)

SCC4111**Special Security Problems****3.00 credits**

A study of executive level security measures pertaining to dignitary protection, client confidentiality, and legal issues. (3 hr. lecture)

SCC4210**Private Investigations****3.00 credits**

An analysis and interpretation of the role of the private investigator within the legal environment. (3 hr. lecture)

SCC4311**Security Administration****3.00 credits**

An analysis and evaluation of leadership styles best suited for success in the field of security. (3 hr. lecture)

SCC4410**Risk Management****3.00 credits**

A study of risk management theories as it pertains to insurance coverage, facility assessment, as well as employee and pre-employment background investigations. (3 hr. Lecture)

SCC4612**Hospital Security Management****3.00 credits**

An analysis of hospital organizational structure, environment, personnel, visitors, and the requirements of regulatory agencies within the security area. (3 hr. lecture)

Dance

DAA1100**Modern Dance 1****2.00 - 3.00 credits**

Beginning exploration of techniques, creative aspects, and theoretical concepts of modern dance which includes but is not limited to proper body alignment and mechanics of breathing and phrasing, verbal movement vocabulary, including structural improvisation. No previous experience required. (1 hr. Lecture; 2-4 hr. lab)

DAA1101**Intermediate Modern Dance****2.00 - 3.00 credits**

Further development of modern dance techniques, creative aspects, and theoretical concepts emphasizing components based on Graham Cunningham and Limon techniques. Prerequisite: Completion of DAA 1100 or permission of the department. (1 hr. lecture; 2-4 hr. lab)

DAA1104**Modern 1****2.00 - 3.00 credits**

Beginning exploration of techniques, creative aspects, and theoretical concepts of modern dance which includes but is not limited to proper alignment and mechanics of breathing and phrasing, verbal and movement vocabulary, including structural improvisation, and exercises utilizing Laban's movement analysis. No previous experience required. Dance Majors only. (1 hr. lecture; 2-4 hr. lab)

DAA1105**Intermediate Modern****2.00 - 3.00 credits**

Further development of modern dance techniques, creative aspects, theoretical concepts emphasizing components based on Graham, Cunningham and Limon techniques. Prerequisite: Completion of DAA 1104 or permission of the department. Dance Majors only. (1 hr. lecture; 2-4 hr. lab)

DAA1200**Ballet Dance 1****2.00 - 3.00 credits**

Designed to provide experiences relative to the various aspects of ballet techniques and terminology at a primary level. Special fee. (1 hr. lecture; 2-4 hr. lab)

DAA1201**Intermediate Ballet Dance****2.00 - 3.00 credits**

The continued development of various aspects of ballet technique terminology. Prerequisite: DAA 1200 or permission of the department. May be repeated for credit. (1 hr. lecture; 2-4 hr. lab)

DAA1204**Ballet 1****2.00 - 3.00 credits**

Beginning exploration of techniques and theoretical concepts of ballet increasing awareness of proper alignment, balance, coordination and application of various musical meters. No previous experience required. Dance Majors only. (1 hr. lecture; 2-4hr. lab)

DAA1205
Intermediate Ballet
2.00 - 3.00 credits

Continuing exploration of techniques and theoretical concepts of ballet placing further emphasis on precision of lines and exactness of movement. Prerequisite: DAA 1204 or permission of the department. Special fee. Dance Majors only. (1 hr. lecture; 2-4 hr. lab)

DAA1290
Ballet for the Theater 1
1.00 - 3.00 credits

Music Theatre students will be receiving a systematic training of the body through a progressive study of the traditional classic ballet vocabulary. Stress is on placement, flexibility and coordination. (2-6 hr. lab)

DAA1291
Ballet for the Theater 2
1.00 - 3.00 credits

A continuation of the systematic training of the body through a progressive study of the traditional classic ballet vocabulary. More bare exercises and simple adagio jumps and turns will further the concentration on flexibility and coordination. Prerequisite: DAA 1290. (2-6 hr. lab)

DAA1330
Afro-Caribbean Dance
1.00 - 3.00 credits

Designed for those students wishing to learn the dance skills and techniques of the dance from Africa and the Caribbean. Special fee. (1 hr. lecture; 2-4 hr. lab)

DAA1500
Jazz Dance Technical 1
2.00 - 3.00 credits

Designed to provide experiences in the styles of theatrical jazz dance at a primary level. (1 hr. lecture; 2-4 hr. lab)

DAA1504
Jazz Dance 1
2.00 - 3.00 credits

This course is designed to introduce the student to the vocabulary and technique of jazz dance, incorporating a fusion of styles from popular, Afro-Caribbean, and contemporary modern jazz choreographers.

For majors only. Audition required. May be repeated for credit. (1 hr. lecture; 2-4 hr. lab)

DAA1505
Jazz Dance 2
2.00 - 3.00 credits

This course continues the student's introduction to the vocabulary technique of jazz dance, incorporating a fusion of styles from popular dance, Afro-Caribbean, and traditional and contemporary modern Jazz choreographers. For majors only. Audition required. (1 hr. lecture; 2-4 hr. lab)

DAA1520
Tap Dance
2.00 - 3.00 credits

Designed for students interested in learning the skills and techniques of tap dancing. (1 hr. lecture; 2-4 hr. lab)

DAA1680
Repertory 1
2.00 - 3.00 credits

A special workshop course designed to provide the student with experience relative to the performance of dance concerts. Works choreographed by students as well as faculty will be featured. (1 hr. lecture; 2-4 hr. lab)

DAA2103
Advanced Modern Dance 2
2.00 - 3.00 credits

Further development of modern dance techniques, creative aspects and theoretical concepts based on Graham, Cunningham, and Limon technique. Prerequisite: DAA 2102 or permission of the Department. (1 hr. lecture; 2-4 hr. lab)

DAA2106
Modern 2
2.00 - 3.00 credits

Further development of modern dance techniques, creative aspects and theoretical concepts emphasizing components based on Graham, Cunningham and Limon techniques. The use of improvisation as an introduction to basic principles of form and their application to dance composition will be emphasized. Prerequisite: DAA 1104 or permission of the department. Dance Majors only. (1 hr. lecture; 2-4 hr. lab)

DAA2107
Advanced Modern 2
2.00 - 3.00 credits

Further development of modern dance techniques, creative aspects and theoretical concepts based on Graham, Cunningham, and Limon techniques. Prerequisite: DAA 2106 or permission of the department. May be repeated for credit. Dance Majors only. (1 hr. lecture; 2-4 hr. lab)

DAA2202
Ballet Dance 2
2.00 - 3.00 credits

The continued development of various aspects of ballet technique and terminology. Prerequisite: DAA1201 or permission of the department. (1 hr. lecture; 2-4 hr. lab)

DAA2203
Advanced Ballet Dance
2.00 - 3.00 credits

The continued development of various aspects of ballet technique and terminology. Prerequisite: DAA2202 or permission of the department. May be repeated for credit. (1 hr. lecture; 2-4 hr. lab)

DAA2206
Ballet 2
2.00 - 3.00 credits

Continuing exploration of techniques and theoretical concepts of ballet placing further emphasis on precision of line and exactness of movement. Prerequisite: DAA 1204 or permission of the department. Dance majors only. (1 hr. lecture; 2-4 hr. lab)

DAA2207
Advanced Ballet
2.00 - 3.00 credits

Continuing exploration of techniques and theoretical concepts of ballet placing further emphasis on precision of line and exactness of movement. Prerequisite: DAA 2206 or permission of the department. May be repeated for credit. Dance majors only. (1 hr. lecture; 2-4 hr. lab)

DAA2293
Ballet for the Theater 2
1.00 - 3.00 credits

Music theatre students will continue receiving an advanced systematic training

of the body through a study of the traditional classic ballet vocabulary. Emphasis will continue on longer and more advanced combinations in the center and developing different kinds of movements. (2-6 hr. lab)

DAA2570
Modern Dance for Theater 1
1.00 - 3.00 credits

Music theatre students will be receiving training of the body through the study of modern dance vocabulary as developed by the originators of this dance form in the twentieth century. In the first semester concentration will be put on alignment, rhythm and phrasing, introducing the students to the fundamentals of jazz techniques. (2-6 hr. lab)

DAA2571
Modern Dance/Jazz for the Theater 2
1.00 - 3.00 credits

Music theatre students will continue receiving training of the body through the study of modern dance vocabulary. In the second semester emphasis will be on developing carriage, rhythm and more advanced phrasing through jazz techniques and styles. Prerequisite: DAA 2570. (2-6 hr. lab)

DAA2610
Dance Composition and Improvisation 1
2.00 - 3.00 credits

Individual experience in developing movement phrases and combinations based on solving problems within a form and a movement framework, as well as the movement imagery designed to develop the dancer's creative imagination. Individuals will experience composition using the basic elements of movement theory in an improvisational framework. (1 hr. lecture; 2-4 hr. lab)

DAA2611
Dance Composition and Improvisation 2
2.00 - 3.00 credits

Further exploration of choreographic tools with emphasis on group forms, usage space, and orchestrations of movement. The formal study of compositional prin-

ciples of choreographic invention with emphasis on developing personal style. Prerequisite: DAA 2610. (1 hr. lecture; 2-4 hr. lab)

DAA2680
Repertory 1
2.00 - 3.00 credits

Dance works in both ballet and many different styles of modern and ethnic dance vocabularies are studied. Works include both standard repertory and commissioned dances. Students work with choreographers, directors and reconstructors of classic works, giving the dancer the experience of being choreographed on and being directed in repertory works. The works learned are performed by the students in workshop and public performances throughout the year. (1 hr. lecture; 2-4 hr. lab)

DAA2681
Repertory 2
2.00 - 3.00 credits

A continuation of DAA 2680. Prerequisite: DAA 2680. (1 hr. lecture; 2-4 hr. lab)

DAN1500
Practicum in Dance Production 1
1.00 credits

Emphasis is on the production aspects of dance. Along of all dance activity and concerns culminating in studio performance will be required. Admission by audition or department placement. (2 hr. lab)

DAN2100
Dance Appreciation
3.00 credits

This course is a comprehensive overview of dance as an art form, as entertainment, and as a social activity. Specific dance genres such as ballet, modern dance, jazz dance, and world dance forms and the importance of the roles of dancers, choreographers and the audience will also be the focus of this course. This course is designed to give the student a foundation level understanding of dance as an art form and its historical and cultural significance from ancient times into the 21st Century. (3 hr. lecture)

DAN2130
Dance History 1
3.00 credits

Study of origins and development of dance as an art form from its inception in primitive cultures to present. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

DAN2131
Dance History 2
3.00 credits

Examine the dance through the ages from the Stone Age participatory dances to the spectator dances of the Orient, the Classical period in Greece and Rome and the Early Middle Ages. Concluding with the historical development of dance forms from the late Middle Ages through the Renaissance into the 20th Century. Emphasis is on the dance as a spectator event and a participatory art in relationship to other arts forms. Prerequisite: DAN 2130. (3 hr. Lecture)

DAN2430
Laban Movement Analysis 1
3.00 credits

An introduction to Rudolf Laban's basic principles of effort, shape and space harmony. The class will explore ways of varying movement dynamics, and will assist the student in discovering the many ways that the body can shape itself and project into space. Prerequisite: Permission of department chairperson. (3 hr. lecture)

DAN2431
Laban Movement Analysis 2
3.00 credits

A further study of Laban's basic principles, this course provides insights into one's personal movement style and increases awareness of what movement communicates and expresses. Prerequisite: DAN 2430 or permission of department chairperson. (3 hr. lecture)

DAN2630
Literature & Materials of Music for Dance 1
2.00 - 3.00 credits

This course serves to develop the personal musical interest of choreographers and dance artists. The composition and performance of simple musical works will be

taught. Actual hands on skills with dance accompaniment will be developed. (2-3 hr. lecture)

DAN2631
Literature & Materials of Music for Dance 2
2.00 - 3.00 credits

This course provides an intensive survey of the history of music and music for the dance. Touching on the Greek heritage, important composers of the Renaissance to the common practice period will be covered. Careful study of the 20th-Century masterworks concludes the course. Prerequisite: DAN 2630. (2-3 hr. lecture)

Dental Hygiene

DEH1002
Pre-Clinical Dental Hygiene
2.00 credits

Introduction to procedures relevant to the practice of dental hygiene. Corequisites: DEH 1002L, 1133, 1133L (2 hr. lecture)

DEH1002L
Pre-Clinical Dental Hygiene Laboratory
2.00 credits

Laboratory for DEH 1002. Corequisite: DEH 1002. Laboratory fee. (6 hr. lab)

DEH1133
Dental Anatomy, Histology and Physiology
2.00 credits

This course covers specific tissues of the oral cavity, head, neck and their embryonic development. The students will learn structure, morphology and function of the primary and permanent dentitions. (2 hr. lecture)

DEH1400
General and Oral Pathology
3.00 credits

Processes of inflammation, necrosis, retrograde changes, diseases caused by bacteria, viruses, and other organisms. Emphasis will be placed on differentiating between normal and abnormal conditions of the oral cavity. Prerequisite: DEH 1130, DES 1200. (3 hr. lecture)

DEH1710
Oral Health Literacy
1.00 credit

Students will learn the concepts of oral health literacy. Students will also identify how to improve patient's oral health literacy and the barriers that impede oral health care. (1 hr. lecture)

DEH1720
Preventative Dentistry
2.00 credits

This is a foundation course in dental hygiene preventive care. Students will learn the concepts of oral health and how to prevent future disease. Students will become engaged in developing their own prevention strategies by selecting with a rationale, appropriate oral health devices used for self-care. A.S. degree only. (2 hr. lecture)

DEH1800
Dental Hygiene 1
2.00 credits

Theory of the removal of hard and soft deposits from the teeth, and other related postoperative and preventive procedures. Prerequisites: DEH 1002, 1002L, 1133; corequisite: DEH 1800L. (2 hr. lecture)

DEH1800L
Dental Hygiene 1 Clinic
3.00 credits

Clinic for DEH 1800. Corequisite: DEH 1800. Laboratory fee. Prerequisite: DEH 1002, 1002L; corequisite: DEH 1800. Laboratory fee. (144 hr. clinic)

DEH1802L
Dental Hygiene 2 Clinic
1.00 credits

Continuation of clinical skills from DEH 1800L. Prerequisites: DEH 1800, 1800L. Laboratory fee. (48hr. clinic)

DEH1804L
Dental Hygiene 3 Clinic
1.00 credits

Designed to further student's knowledge and skills through clinical experiences more difficult than those experienced in DEH 1802L. Prerequisite: DEH1802L. Laboratory fee. (48 hr. clinic)

DEH1811
Professional Issues
2.00 credits

This course is designed to provide the dental hygiene student with an understanding of the political, social, environmental and professional issues that affect the practice of dental hygiene. These issues include: a) cultural diversity, b) legal and ethical responsibilities, c) sexual harassment, d) child abuse, e) problem solving, and f) communication style. Corequisite: DEH 1800L. (2 hr. lecture)

DEH1840L
Advanced Radiographic & Clinical Assessment Techniques
1.00 credits

A laboratory course introducing advanced digital radiographic techniques, the intra-oral camera, periodontal probing and dental charting software and other clinical assessment tools. These skills will enable the student to provide comprehensive patient treatment and enhance their ability to interpret intraoral conditions. (48 hr. clinic)

DEH1940L
Dental Hygiene 1 Optional Learning Support
1.00 credits

DEH 1940L runs concurrently with DEH 1800L and is designed to enhance student's basic clinical skills and critical thinking abilities. Special emphasis is placed on collaborative learning techniques, effective decision-making, proper time management and self-assessment as students interact with their peers and apply their skills and knowledge in the treatment of clinical patients. (3 hr. clinic)

DEH2202
Nutrition and Dental Health
2.00 credits

This course provides a study of nutrients, their nature, source, and utilization. Students will learn the relationship between diet and oral health care and oral manifestations of nutritional deficiencies. (2 hr. lecture)

DEH2300
Pharmacology and Pain Control
1.00 credits

This course introduces the student to a broad range of Pharmacological concepts including drug categories, drug action, and adverse drug effects. Dental prescriptions such as the antibiotics, antifungals and antivirals will be studied. Students will learn the common medical conditions affecting dental hygiene care, such as cardiovascular disease, endocrine and neurological disorders as well as their drug management will be examined. Prerequisite: DES 1044; corequisite: DEH 1802L, 2300L. (1 hr. lecture)

DEH2300L
Pharmacology and Pain Control Laboratory
1.00 credits

This course is designed to prepare the dental hygiene student for the safe and effective administration of local anesthesia. Students will learn about the psychology of pain management, pharmacology of anesthetic agents, emergency precautions, and are view of anatomy and physiology as they relate to the administration of anesthetic agents. This course will include online and clinical instruction. Co-requisite: DEH2300. Special Fee. (2 hr. lab)

DEH2602
Periodontology 1
1.00 credits

This course will introduce the student to the concepts of non-surgical periodontal therapy, risk factors in periodontal diseases, classifications of periodontal diseases, the components of the comprehensive periodontal assessment and care plan. Ultrasonic periodontal debridement will be studied. Furthermore, the course will include the study of behavior motivation, the dental hygiene human needs conceptual model, the phases of self-care education and the importance of case presentation in modifying client self-care. (1 hr. lecture)

DEH2603
Periodontology 2
2.00 credits

Etiology, classification, diagnosis, treatment and maintenance of the periodontal patient. Prerequisites: DEH 1400, DEH 1802L. (2 hr. lecture)

DEH2603L
Periodontology 2 Laboratory
1.00 credits

Laboratory for DEH 2603. Corequisite: DEH 2603. Prerequisite: DEH 1400; corequisite: DEH 2603. Laboratory fee. (2 hr. lab)

DEH2701
Community Dental Health 1
3.00 credits

Public Health Dentistry and the role of the dental hygienist. Prerequisite: DEH 1804L. (3 hr. lecture)

DEH2702L
Community Dental Health 2 Clinic
2.00 credits

Provides the student an opportunity for application of the principles of public and community dentistry. Corequisite: DEH 2701. (4 hr. field experience)

DEH2806
Dental Hygiene 4
2.00 credits

This course is a continuation of dental hygiene theory and practice. Students will learn the process and procedures for gingival curettage and root planning. Prerequisite: DEH1804L; Corequisite: DEH2806L (2 hr. lecture)

DEH2806L
Dental Hygiene 4 Clinic
4.00 credits

Clinic for DEH 2806. Corequisite: DEH 2806. Laboratory fee. (192 hr. clinic)

DEH2808
Dental Hygiene 5
2.00 credits

Students will learn the basic dental and behavioral sciences within the practice of dental hygiene. Special emphasis is given to Florida laws governing dental hygiene

practices. Prerequisite: DEH2806, DEH2806L; Corequisite: DEH2808L. (2 hr. lecture)

DEH2808L
Dental Hygiene 5 Clinic
4.00 credits

Ongoing experience in total dental hygiene care of the periodontally involved patient. Prerequisites: DEH 2603, 2603L, 2806L; corequisite: DEH 2808. Laboratory fee. (8 hr. clinic)

DEH2810L
Interprofessional Practice and Education Lab
1.00 credit

Students will learn to examine the Dental Hygiene scope of practice through professional identity by way of interprofessional collaboration. Students will also develop knowledge and skills to serve on health professional teams to improve health outcomes. Prerequisite: DEH1811. (2 hr. lab)

DES1200
Dental Radiology
2.00 credits

Techniques and theory for the safe and effective use of radiographs as related to dentistry. Corequisites: DEH 1002, 1002L, DES 1200L. (2 hr. lecture)

DES1200L
Dental Radiology Laboratory
2.00 credits

Laboratory for DES 1200. Prerequisite: Acceptance into the Dental Hygiene Program; corequisite: DES1200. Laboratory fee. (4 hr. lab)

DES1600
Dental Office Emergency
2.00 credits

This course is designed to instruct students in the fundamental patient assessment skills needed to identify and manage emergencies that may arise in the dental office. (2 hr. lecture)

DES2100
Dental Materials
2.00 credits

Physical properties of dental materials and their use in the oral cavity. Prerequisite:

COLLEGE CREDIT COURSES

DEH 2806L, DEH 1133; corequisite: DES 2100L. (2 hr. lecture)

DES2100L **Dental Materials Laboratory** **1.00 credits**

Laboratory for DES 2100. Corequisite: DES 2100. Laboratory fee. (2 hr. lab)

Economics

ECO1949 **Co-op Work Experience 1: ECO** **3.00 credits**

This course is designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. (3 hr. lecture)

ECO2013 **Principles of Economics (Macro)** **3.00 credits**

An overview of basic economic concepts and institutions. Modern national income and product accounting, economic fluctuations, money, banking, monetary and fiscal policy, economic stabilization theory and policy, the public sector, theory of economic growth and development, and comparative economic systems. This course fulfills the Gordon Rule requirement. Prerequisites: ENC1101 and MAT1033 or higher with a "C" or higher. (3 hr. lecture)

ECO2023 **Principles of Economics (Micro)** **3.00 credits**

Theory of markets, price mechanism, production, distribution and resource allocation; application of marginal analysis and equilibrium theory to the price and output decisions of the individual firm in pure competition, monopolistic competition, oligopoly and monopoly; agriculture; labor, rent interest and profits theory.

Prerequisite: MAT1033 or higher with a "C" or higher. (3 hr. lecture)

ECO2071 **Economics Institute Elementary Education 1** **3.00 credits**

This course is designed for Elementary Teachers. It provides coverage of major micro-economic concepts and their infusion into the K-12 curriculum through an activity oriented approach. This course will include those economic concepts required in the minimum Student Performance Standards for Social Studies. These concepts will be handled through various methodologies appropriate for the elementary curriculum. The latest economic education materials will be utilized. (3 hr. lecture)

ECO2301 **History of Economics Ideas and Their Consequences** **3.00 credits**

An interdisciplinary study with major elements of economics, philosophy, history, sociology, anthropology, and political science that begins in the agricultural landscape of the 1700s and brings one forward into the age of the corporate giant and the nuclear warfare of modern industrial society. (3hr. lecture)

ECO2949 **Co-op Work Experience 2: ECO** **3.00 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

Education

EDE1040 **GKT Preparation for English Language Skills Test** **1.00 credit**

The student will review formal English language skills in order to prepare to pass the General Knowledge Test English Language Skills section. The student will refine and demonstrate their knowledge of language structure, vocabulary application, and Standard English conventions. (1 hr. lecture)

EDE1044 **GKT Preparation for Reading Test** **1.00 credit**

The student will review reading comprehension strategies in order to prepare to pass the General Knowledge Test Reading section. The student will refine their integration of reading skills in order to effectively analyze text. (1 hr. lecture)

EDE1045 **GKT Preparation for Mathematics Test** **2.00 credits**

The student will review mathematics concepts in order to prepare to pass the General Knowledge Test Mathematics section. The student will refine their knowledge of number sense, concepts, and operations; geometry and measurement; algebraic thinking and the coordinate plane; and statistics, probability, and data interpretation. (2 hr. lecture)

EDE1046 **GKT Preparation for Essay Test** **1.00 credit**

The student will review formal college-level writing in order to prepare to pass the General Knowledge Test Essay section. The student will refine their ability to develop a cohesive essay that satisfactorily addresses the given prompt. (1 hr. lecture)

EDF1005 **Introduction to the Teaching Profession** **3.00 credits**

The student will learn the historical, sociological, and philosophical foundations of

education, governance, finance, policies, legal, moral and ethical issues, and the professionalism of teaching. The student will develop an understanding of the Florida Educator Accomplished Practices, standards, and Professional Educator Competencies. Fifteen hours of service learning experience are required. (3 hr. lecture)

EDF2085
Introduction to Diversity
3.00 credits

The student will explore the role of teachers as agents of social change and examine their own attitudes towards diversity and exceptionalities. The student will engage in learning opportunities that include cross-cultural dialogue and critical reflection on social justice and oppression based on race, ethnicity, gender, sexual orientation, religion, (dis)ability status, and social class. 15 hours of Service Learning are required. (3hr. lecture)

EDF 2130
Human Development and Learning for Educators
3.00 credits

The student will investigate child and adolescent development, including theories and principles of learning. The student will define typical and atypical human growth and development across the lifespan, with emphasis on major developmental issues, and how these interplay to holistically shape development. The student will examine literature on developmental processes, learning theories and concepts related to instructional practices and the crucial role that educators play in fostering the mindsets and skill sets that support optimal development throughout the lifespan of their diverse learners. This course will satisfy the requirement for a course in child and adolescent development for teacher certification.

EDF3115
Child Development for Inclusive Settings
3.00 credits

This course provides an overview of human life from fertilization through eight years

of age. The student will examine growth and developmental characteristics during the prenatal, infancy, and early childhood periods. The student will learn to analyze typical and atypical development, developmental theories, learning theories, brain research, attachment, and relationships. Pre/Co-requisites: EEC1000 or 1001, EEC2224, EEC2271, EEC4401, EEC2407, EEC2601. Special Fee. (3 hr. lecture)

EDF4430
Measurement and Assessment in Education
3.00 credits

The student will learn current research-based principles of assessment. The student will select specific standards and competencies and develop formative and summative traditional and alternative assessments. The student will interpret assessment data that will improve academic achievement and ensure equity in the application of quantitative and qualitative assessments. Pre-requisite: EDG3321. Special Fee. (3 hr. lecture)

EDF4433
Data-Driven Instructional Change
3.00 credits

This course on data-driven decision-making is designed for current teachers. The student will learn to set measurable goals, collect and analyze data, implement instructional interventions, and align practice to school improvement. Prerequisite: Bachelor's degree in education. (3 hr. lecture)

EDG2311
Substitute Training
1.00 credits

Provides students with the necessary knowledge, skills, and dispositions to successfully serve as temporary instructors for the Miami-Dade County Public School (M-DCPS) Board. The course provides best practices in classroom management and effective teaching strategies; key items of M-DCPS Board policy and Florida statutes; and the Code of Ethics and Principles of Professional Conduct of the Education Profession in Florida. (1 hr. lecture)

EDG2313
General Teaching Skills for Temporary Instructors
1.00 credits

This one credit course is intended to extend the basic knowledge introduced in EDG 2311. Competencies provide best practices in effective teaching strategies. Students will learn the link between instructional objectives-matching strategies and activities-assessing learner competency; Bloom's Taxonomy and higher order thinking skills. The course content has been selected to comply with Florida statute 1012.35. Prerequisite: EDG 2311 and MDCPS Temporary Instructor Certification. (1 hr. lecture)

EDG2413
Effective Classroom Management for Temporary Instructors
1.00 credits

This one credit course is intended to extend the basic classroom management techniques for Temporary Instructors introduced in EDG 2311. Students will learn how to implement effective classroom rules, natural and logical consequences, positive and negative reinforces, motivation to learn, teacher "wittiness," bell-to-bell instruction, effective grouping, and handling of severe discipline problems. Prerequisite: EDG 2311 and MDCPS Temporary Instructor Certification. (1 hr. lecture)

EDG2704
Teaching the Holocaust
3.00 credits

The student will learn the history and issues of the Nazi Holocaust in order to prepare research-based instruction of Florida's mandated curriculum using a variety of resources, media, and literature. This course satisfies Florida Department of Education requirements for teacher recertification. (3 hr. lecture)

EDG2943
Educational Service Field Work
1.00 - 3.00 credits

The student will learn to compile the necessary documents and complete the process of obtaining a state and/or national

early childhood credential. The student must complete the four courses in either the Infant/Toddler Specialization or the Preschool Specialization in order to take this course. Prerequisite: EEC1311, EEC1200, EEC1000, EEC2202, EEC1001, EEC1522, EEC2201, EEC2407 (1 3 hr. lecture)

EDG3321
General Teaching Skills
3.00 credits

The student will learn how human development and learning theories, developments in educational neuroscience, and current research based pedagogy apply to the teaching and learning process. The student will incorporate principles and skills of effective instruction in the planning, including differentiated instruction, aligning instructional teaching skills to practice, selecting appropriate formative assessment, and developing learning experiences that require students to demonstrate a variety of skills. Special Fee. (3 hr. lecture)

EDG3410
Classroom Management and Communication for P-12 Teachers
3.00 credits

In this teacher certification course, the student will learn to develop practical strategies and use applicable skills to create a positive, safe, organized, equitable, flexible, inclusive, collaborative, and student-centered P-12 classroom environment that promotes learning. (3 hr. lecture)

EDG3443
Classroom and Behavior Management
3.00 credits

The student will investigate how to develop a positive and productive equitable learning environment grounded in research-based character development models and learning theories. The student will learn strategies for observing, assessing, modifying behavior, and communicating with stakeholders. The student will learn to create an inclusive learning environment that encourages positive interactions, self-regulation, and social-emotional learning. Fifteen hours

of clinical experience are required. Pre/Co-requisites: EDG3321. Special Fee. (3 hr. lecture)

EDG4045
Civic Engagement through Service Learning
3.00 credits

This course will prepare K-12 teachers to actively involve their students in civic responsibility and social action through the development and implementation of high-quality service learning experiences. Students will learn research based practices including utilization of quality literature, curricular integration, and collaboration between students, teachers, and the community will be modeled and practiced. Prerequisite: Must possess a B.S. degree. (Recertification Only). (3 hr. lecture)

EDG4343
Instructional Strategies for P-12 Teachers
3.00 credits

In this teacher certification course, the student will utilize research-based instructional design models to create lesson plans and instruction that aligns with state standards. The student will learn to incorporate educational theories and educational neuroscience to develop strategies for inclusive P-12 classrooms serving diverse populations. (3 hr. lecture)

EDG4376
Integrated Language Arts and Social Sciences
3.00 credits

The student will use knowledge, skills, and dispositions from the social sciences to organize and provide integrated instruction in the major themes, concepts, and modes of inquiry in grades K-12. The student will plan and integrate language arts and social science strategies and content to create accessibility of the curriculum to a diverse population. 15 hours of service-learning experience are required. Pre-requisites: EDG3321, Pre/Co-requisites: EDF4430, RED3393. Special Fee. (3 hr. lecture)

EDS4940
Clinical Supervision for Educators
3.00 credits

The course content is congruent with the Florida DOE Training, Clinical Supervision for Educators. Successful completion meets the FS 240.549 mandate for clinical supervision training required for hosting college teacher preparation students in field settings. Students will learn to observe and diagnose teacher classroom performance, write remedial plans, conduct post observation conferences, and evaluate performance. (3 hr. lecture)

EEC1000
Introduction to Early Childhood Education
3.00 credits

This course will provide an overview of Early Childhood Education from Birth to Age 8. The student will develop an understanding of family and societal influences on young children, a relationship-based approach to responsive program planning principles of child growth and development, the role of play in learning, and the importance of Educational Neuroscience in Early Childhood. (Twenty hours of service learning in an early childhood center required.). (3 hr. lecture)

EEC1200
Early Childhood Curriculum 1
3.00 credits

The student will learn developmentally appropriate curriculum planning and its impact on children's total development. The student will examine the importance of dramatic play, proper room arrangement, outdoor environments, advances in technology, scheduling, classroom management, and activity planning for first and second language development, early literacy, and social studies. (3 hr. lecture)

EEC1308
Classrooms for All Young Children
3.00 credits

The student will design and modify learning environments and learning approaches to meet the needs of all children. The student will use technology where applicable and select appropriate materials and

activities to promote student independence, self-regulation, and developmental progress. (3 hr. lecture)

EEC1311
Early Childhood Curriculum 2
3.00 credits

The student will learn developmentally appropriate curriculum planning and its impact on children's total development. The student will examine the importance of integrating appropriate experiences across curriculum including math, science, art, music, creative movement, cooking, nutrition, and health and safety. (3 hr. lecture)

EEC1522
Infant and Toddler Environments
3.00 credits

This course provides the student with information on planning the physical facilities, equipment, and materials for quality infant and toddler environments. Course content allows for observations and examination of how the physical environment affects development of children and supports individual differences utilizing appropriate and culturally responsive strategies. The student will learn about curriculum planning, promoting social and emotional development, language and literacy, child abuse and neglect, and comprehensive family support services in relation to establishing quality environments for children. (3 hr. lecture)

EEC1540
Legal Issues for Childcare Center Owners
3.00 credits

This course is one of three courses designed by the School of Education in partnership with the School of Business that provides Childcare Center Owners the opportunity to gain skills in small business management from both business and education perspectives. The student will develop an understanding of the legal issues involving the ownership of a childcare center. The student will comprehend the impact of legal obligations, regulatory requirements, tax laws, personnel laws, insurance, licensing requirements, employee benefits

and compensation on childcare center ownership. (5 hours of field experience shadowing a childcare center director) (3 hr. lecture)

EEC1541
Financial Management for Childcare Center Owners
3.00 credits

This course is one of three courses designed by the School of Education in partnership with the School of Business that provides Childcare Center Owners the opportunity to gain skills in small business management from both business and education perspectives. The student will develop an understanding of financial management involving the ownership of a childcare center. The student will learn and apply skills in the following areas: financial planning, budgeting, accounting, and record-keeping. (5 hours of field experience shadowing a childcare center director) (3 hr. lecture)

EEC1542
Marketing for Childcare Center Owners
3.00 credits

This course is one of three courses designed by the School of Education in partnership with the School of Business that provides Childcare Center Owners the opportunity to gain skills in small business management from both business and education perspectives. The student will develop an understanding of marketing involving the ownership of a childcare center. The student will learn and apply skills in the following areas: marketing concept, target marketing, marketing strategies, branding, and developing a marketing plan. (5 hours of field experience shadowing a childcare center director) (3 hr. lecture)

EEC1713
Helping All Young Children Become Independent Learners
3.00 credits

The student will learn how to utilize a holistic approach in guiding all young children to become independent learners. The student will learn to utilize positive behavior support strategies to help improve executive functioning skills in all young

children. The student will identify strategies to involve the family. (3 hr. lecture)

EEC1752
Knowing and Understanding All Young Children
3.00 credits

The student learn the process, principles, and patterns of child development. The student will identify the strengths and challenges of children with typical and atypical development. The student will learn to identify indicators of child abuse and neglect. (3 hr. lecture)

EEC1753
Observing and Assessing All Young Children
3.00 credits

The student will learn the process and importance of observing, documenting, and interpreting the behavior of all young children. The student will use observation instruments to understand all young children's growth and development. The student will also develop suggested intervention measures that meet the needs of the children and the families they serve. (3 hr. lecture)

EEC2002
Operation of an Early Childhood Facility
3.00 credits

This introductory course provides an overview for early childhood administrators to develop and enhance their leadership role in designing and implementing quality early care and education programs. The student will study the following topics: organizational leadership and management, programming, and financial and legal issues. This course meets the requirements for the Education Program Administrator Foundational Level Credential. (3 hr. lecture)

EEC2201
Developing Curriculum for Infants and Toddlers
3.00 credits

This course provides the Early Childhood professional with information about developing appropriate curriculum for infants and toddlers based on health, safety,

physical, social, emotional, cognitive, and language development. The student will focus on developmentally appropriate curriculum and learning opportunities based on daily classroom routines. (3 hr. lecture)

EEC2202
Program Development in Early Childhood Education
3.00 credits

Program development in Early Childhood Education is the fourth in a sequence of four courses in Early Childhood Education. The course is primarily concerned with the investigation of effective Early Childhood programming and includes the major areas of the learning environment, disadvantaged children, federal and state programs, special needs and at risk children, current model programs, rules and regulations, and professionalism. Assessment of children and reporting of progress will be examined. The course will emphasize the fostering of effective family/school relationships. (3 hr. lecture)

EEC2221
Curriculum High/Scope Approach
3.00 credits

The student will learn about the High/Scope curriculum, its implementation in the classroom and the different components of this approach: the daily routine, planning time, work time, recall time, small-group time, large-group time, and outside time. The student will also learn to use key experiences to set up the learning environment, support children's learning in their play, encourage them to interact in groups, and plan related learning experiences, that will directly impact on the advancement of children's social, emotional, physical, and cognitive development in the areas of language, math, science, art, music, and creativity. (3 hr. lecture)

EEC2224
Emergent Literacy through the Use of Children's Literature
3.00 credits

The student will learn about the early childhood teacher's role in promoting emergent literacy in early childhood education (birth age 8). Topics will support a

curriculum that builds an understanding of oral language, fluency, vocabulary, comprehension, phonics, phonological awareness, children's literature, family literacy, and literature perspectives to celebrate diversity. (3 hr. lecture)

EEC2401
Family Interaction and Cultural Continuity
3.00 credits

The student will incorporate practices reflecting the values beliefs of families and the cultures of their communities in establishing positive and productive relationships within an educational setting. Emphasis is given to trusting, supportive relationships, and to sustaining a successful partnership with families. (3 hr. lecture)

EEC2407
Facilitating Social Development
3.00 credits

The student will learn about early childhood teaching and learning utilizing educational neuroscience research. The student will examine the interrelation of social, emotional, and intellectual development in young children and their effects on learning. The student will analyze essential life skills for academic success. (Twenty hours of service learning in an early childhood center required). (3 hr. lecture)

EEC2520
Early Childhood Organization Leadership and management
3.00 credits

The student will develop skills needed by early childhood program administrators to manage a high quality center. The student will learn about organizational structure of a center; ethics and professionalism; leadership strategies, skills, and competencies; self-reflection and work environment; quality improvement; staff recruitment, evaluation, and retention. This course meets the requirements for the Florida Advanced Level Child Care and Education Administrator Credential. (Requires employment at an early childhood center). Prerequisite: EEC2002. (3 hr. lecture)

EEC2523
Programming & Management for Early Childhood Administrators
3.00 credits

The student will learn about developmentally and culturally appropriate environments, curriculum, and professional standards for early childhood care program administrators. The student will develop an understanding of child observation, assessment, documentation, and referrals and their importance. The student will learn about program evaluation, health, safety, healthy nutrition practices, and the importance of partnerships with families. This course meets the requirements for the Florida Advanced Level Child Care and Education Administrator Credential. (Requires employment at an early childhood center.) Prerequisite: EEC2002. (3 hr. lecture)

EEC2527
Legal & Financial Issue in Child Care
3.00 credits

The student will learn about the legal and financial issues related to operating a successful early childhood center. The student will learn about financial planning, personnel cost and allocation, budgeting and accounting. The student will develop knowledge about compensation and benefit, risk management, marketing and public relations, regulatory requirements, and legal issues related to childcare management. This course meets the requirements for the Florida Advanced Level Child Care and Education Administrator Credential. (Requires employment at an early childhood center.) Prerequisite: EEC2002. (3 hr. lecture)

EEC2601
Observation and Assessment in Early Childhood
3.00 credits

The student will learn the process and importance of observing, documenting, and interpreting the behavior of young children. Students will learn and apply various methods to document the ongoing development of children and the value of using this information to plan. (20 hours

service learning in a B-4 NAEYC accredited setting). (3 hr. lecture)

EEC3301
General Teaching Methods for Early Childhood Education
3.00 credits

This course will introduce instructional models to design lesson plans and instruction based on state standards. The student will incorporate educational theories and educational neuroscience to develop strategies for early childhood inclusive classrooms serving diverse populations. (Ten hours of clinical experience required in an approved kindergarten-third grade setting.). Pre-requisites: Pre/ Co-requisites: EDF3115 and EEC1000. Special Fee. (3 hr. lect.)

EEX2000
Introduction to Special Education
3.00 credits

The student will learn about the history, legal issues, and legislation related to Exceptional Student Education. The student will learn about the differing types of exceptionalities and the types of supports and accommodations that are provided to students. Prerequisite: EDF1005 (3 hr. lecture)

EEX2010
Teaching Exceptional Children for Temporary Instructors
1.00 credits

This one credit course is intended to extend the basic concepts introduced in EDG 2311. Students will learn research-based child development concepts; federal, state, and local Exceptional Student Education Legislation, programs and procedures; cultural and diversity issues in local schools; the district TESOL program, developmentally appropriate content and activities, and school/classroom organization patterns. Prerequisite: EDG 2311 and MDCPS Temporary Instructor Certification. (1 hr. lecture)

EEX2776
The Challenged Citizen in the Workplace
3.00 credits

This course is designed to provide the necessary skills and attitudes to comprehend,

analyze, apply, discuss, and incorporate effective practice principles when working in a diverse workforce that includes people with mental and physical challenges. This course emphasizes the perspectives, challenges, and processes regarding making the workplace more inclusive for all employees across a wide variety of professional disciplines. (3 hr. lecture)

EEX4094
Nature and Needs of Students with Autism Spectrum Disorders
3.00 credits

The student will learn basic skills, knowledge, and strategies associated with teaching students with autism spectrum disorders (ASD). The student will acquire content and pedagogical knowledge to provide effective instructional practices to students with ASD. Six hours of clinical experience hours are required. Prerequisite: BS in Exceptional Student Education (ESE) plus experience working with students with varying exceptionalities. Special fee. (3 hr. Lecture)

EEX4200C
Medical Needs of Students with Exceptionalities
4.00 credits

The student will learn to address low acuity/high frequency and high acuity/low frequency routine medical situations and emergency medical situations through evidence-based practices. The student will plan, intervene, and evaluate the medical needs of students with exceptionalities through active learning, role-playing and high-fidelity simulations. The student will also learn to use appropriate interventions until qualified personnel are available. Departmental Permission and evidence of current CPR certification. (3 hr. lecture, 1 hr. lab)

EEX4232
Assessment and Diagnosis of Autism Spectrum Disorders
3.00 credits

The student will learn assessment instruments and strategies used for the referral, diagnosis, and remediation of academic and behavioral difficulties of students with

autism spectrum disorders. The student will learn to utilize assessment instruments for instructional planning and evaluating learning outcomes. Six hours of clinical experience are required. Special fee. Prerequisite: EEX4094 (3 hr. lecture)

EEX4613
Behavior Supports and Management for Students with Autism Spectrum Disorders
3.00 credits

The student will learn disability specific assessment tools used to evaluate social, emotional, and behavioral skills of students with autism spectrum disorders. The student will learn intervention strategies for teaching positive behavior support and appropriate adaptive behavior. Six hours of clinical experience are required. Prerequisite: BS in Exceptional Student Education (ESE) plus experience working with students with varying exceptionalities. Special fee. (3 hr. lecture)

EEX4761
Assistive Technology and Communication Systems for Students with Autism Spectrum Disorders
3.00 credits

The student will learn about assistive technology (AT) strategies including its use for improving the communication and functional capabilities of students with autism spectrum disorders. The student will learn about instructional and assistive technology devices used to support students with autism spectrum disorders. Six hours of clinical experience are required. Special fee. Corequisite: EEX4094. (3 hr. lecture)

EGI4010
Introduction to Gifted and Talented Education
1.00 credit

The student will identify the legislation and policies associated with Gifted and Talented Education, discuss the characteristics of individuals identified as gifted and talented, understand the nature and needs of the gifted and talented, select appropriate curricula and assessment modifications, as well as discuss the impact of home,

school, and community relationships on the gifted and talented. (1 hr. lecture)

EGI4050
Nature and Needs of Gifted Students
3.00 credits

This is one of five courses designed to provide students characteristics and educational needs of adverse gifted population; giftedness is examined historically, theoretically, and practically. Students will learn the changing views of intelligence and giftedness, understanding the diverse socio-cultural, linguistic, and economic backgrounds of the gifted, policy and practice, program models, and the process of giftedness identification. Must hold FLDOE Teaching Certificate. (3 hr. lecture)

EGI4230
Curriculum and Educational Strategies for the Gifted
3.00 credits

This course focuses on the implementation of research-based strategies, differentiated curriculum planning, and instructional design for the education of gifted students. Students will learn a variety of enrichment and acceleration approaches and techniques for use in the organization of the learning environment to promote student achievement. Prerequisite: EGI4050 (3 hr. lecture)

EGI4244
Educating Special Populations of Gifted Students
3.00 credits

This course emphasizes the socio-cultural and educational similarities and differences of gifted students. Students will learn the instructional strategies, resources, and materials necessary for the implementation of an equitable system of instruction. Prerequisite: EGI4050 (3 hr. lecture)

EGI4301
Theory and Development of Creativity
3.00 credits

This course focuses on practical applications of the psychological, environmental, and socio-cultural aspects of creativity. Students will learn effective teaching and

assessment strategies to manifest and nurture creative thinking and expression are modeled and practiced. Prerequisite: EGI4050 (3hr. lecture)

EGI4410
Guidance and Counseling of Gifted Students
3.00 credits

This course focuses on psychological, cultural, and environmental factors that influence the affective growth and development of gifted students. Students will learn guidance, mentoring, and counseling interventions that address the unique needs of gifted students. Prerequisite: EGI4050 (3 hr. lecture)

EME2040
Creativity, Innovation, and Technology for the 21st Century Learner
3.00 credits

The student will learn to manage a productive and safe technology environment by promoting creativity and innovation in the classroom. The student will gain 21st century knowledge, skills, and attitudes for applying technology across multiple disciplines and grade levels. Prerequisite: CGS1060 (3 hr. lecture)

EME2071
Educating Young Children for Digital Literacy in the 21st Century
3.00 credits

This course provides an overview of technology and interactive media in early childhood. The student will learn ways in which to optimize opportunities for young children's cognitive, social, emotional, physical, and linguistic development by using technology and media in ways that are grounded in principles of early childhood development and developmentally appropriate practices. The students will learn how to make informed decisions regarding the intentional use of technology and media in ways that support children's learning and development. Prerequisite: Departmental permission. (3 hr. lecture)

EME4610
Introduction to Instructional Design
3.00 credits

This is the first in a series of five courses that leads to a certificate in Instructional Design. The student will develop an overview of the field of instructional design as it relates to training, development, and education. The student will compare and contrast instructional design models, learning theories, and current technologies.

EME 4611
Instructional Design Development I
3.00 credits

In this course, the student will develop and launch a prototype of a training, development, or educational opportunity using different types of media tools. Pre/Co-requisites: EME 4683

EME 4612
Instructional Design Development II
3.00 credits

In this course in Instructional Design, the student will develop assessments and an evaluation plan for a training, development, or educational opportunity. The student will conduct User Acceptance Testing using established criteria, and utilize feedback to modify his or her prototype. Pre/Co-requisites: EME 4611

EME 4671
Instructional Design Analysis
3.00 credits

In this course, the student will evaluate and analyze training, development, and education opportunities and project development. The student will develop a needs analysis for an instructional design project based on research-based best practices in the field. Pre/Co-requisites: EME 4610 Introduction to Instructional Design

EME4683
Instructional Design Application
3.00 credits

In this course, the student will utilize best practices of learning design, learning theories, and instructional strategies for adult learners to write objectives, develop an outline, and create storyboards that encompass the scope of a training, devel-

opment, or educational opportunity. Pre/Co-requisites: EME 4671

TSL1084

Introduction to ESOL Principles and Practices

3.00 credits

The student will learn about the major elements of first and second language acquisition. Course activities are designed to increase students' understanding of ways to improve the quality of language teaching and learning and to expand their communication and critical thinking skills. Course assignments are designed to enhance students' skills in creating a positive learning environment for all K-12 learners, including those at-risk and those from diverse language backgrounds. A minimum of 10 hours of structured field experience is required. (3 hr. lecture)

TSL2082

Introduction to Teaching English to Speakers of Other Languages (TESOL)

3.00 credits

In this introductory course, the student will understand the process of acquiring a second language, and the social-emotional impact it has on the learner. The student will examine the laws and policies in place to support English language learners (ELLs), as well as research-based strategies to facilitate language development, literacy skills and content knowledge.

Education Foundations & Policy Studies

EDF4991

Brain-Based Teaching: Reading and the Brain

3.00 credits

The student will learn how the brain processes information and acquires the ability to read. The student will apply educational neuroscience and research-based pedagogy to the instruction of P-12 content areas. (3 hr. lecture)

EDF4993

Brain-Based Teaching: The Bilingual Brain

3.00 credits

The student will learn how P-12 English Language Learners' (ELLs) brain processes information. The student will acquire research-based and best practices for teaching, differentiating instruction, and assessing ELLs. (3 hr. lecture)

EDF4994

Brain-Based Teaching: Mathematics and the Brain

3.00 credits

The student will learn how the brain processes information and acquires the ability to perform mathematical processes. The student will integrate educational neuroscience, cognitive research-based, instructional practices, and mathematics assessment into the P-12 classroom. (3 hr. lecture)

EEC3211

Science, Technology, and Mathematics (STEM) Methods for ECE I

3.00 credits

The student will learn to use scientific and mathematical educational neuroscience research based methods and strategies to teach inquiry and problem-solving skills and plan activities for young children that foster exploration in the sciences. (Ten hours of clinical experience required in an approved prekindergarten inclusion setting; 1 observation required.). Pre/Co-requisites: EDF3115, EEC3301. Special Fee. (3 hr. lecture)

EEC3212

Integrated Social Sciences, Humanities, and Arts

3.00 credits

(Ten hours of clinical experience required in an approved prekindergarten inclusion setting; 1 observation required.). Pre-requisites: EEC3301. Special Fee. (3 hr. lecture)

EEC4219C

Science, Technology, and Mathematics (STEM) Methods for ECE II

3.00 credits

The student will learn to use scientific and mathematical research-based methods and strategies to teach inquiry and problem solving skills and plan activities for young children that foster exploration in the nature of science, mathematics, and technology. (Ten hours of clinical experience required in an approved kindergarten-third grade inclusion setting with ESOL students during math and science instruction: 1 observation.) Prerequisites: EEC3301, EEC 3211. Special Fee. (3 hr. lecture)

EEC4268

Practicum in Early Childhood Education

3.00 credits

The student will plan and implement action research strategies to meet the needs of struggling readers. The student will attend professional development experiences designed to develop knowledge and pedagogy, and will prepare for teaching interviews and entry into the profession. (Sixty hours of clinical experience are required in an approved first-third grade setting with ESOL students) Corequisites: LAE 4211. Special Fee. (144 hr. Practicum)

EEC4936

Student Teaching Seminar I: ECE

1.00 credits

The student will learn to discuss and reflect on their development and mastery of the Pre-Professional Florida Educator Accomplished Practices during the completion of their internship in a Birth-Four classroom setting. Co-requisites: EEC4940. (1 hr. lecture)

EEC4936C

Student Teaching Seminar II: ECE

1.00 credits

The student will learn to discuss and reflect on their development and mastery of the Pre-Professional Florida Educator Accomplished Practices during the completion of their internship in a K-3 classroom

setting. Co-requisites: EEC4940C. (1 hr. lecture)

EEC4940
Internship in Early Childhood
Education I
5.00 credits

The student will complete a full time (10 weeks), supervised teaching experience in a Birth - Four setting. The student will learn and experience all of the educational and professional responsibilities common to teachers within their area of expertise. Co-requisites: EEC4936. (240 hr. Internship)

EEC4940C
Internship in Early Childhood
Education II
5.00 credits

The student will complete a full time (10 weeks), supervised teaching experience in the K-3 setting. The student will learn and experience all of the educational and professional responsibilities common to teachers within their area of expertise. Pre-requisites: Co-requisites: EEC4936C. (240 hr. Internship)

EEX3071
Teaching Exceptional and Diverse
Populations in Inclusive Settings
3.00 credits

The student will learn current research-based instructional strategies, educational neuroscience, and legal and ethical issues necessary in addressing the needs of diverse learners in inclusive classrooms. The student will make informed decisions in adapting, accommodating, and modifying the curriculum for students with special needs. Fifteen hours of clinical experience are required. Pre-requisites: EEX2000 and EDG3321. Special fee. (3 hr. lecture)

EEX3120
Language Development and
Communication Disorders
3.00 credits

The student will learn about typical language and speech development, characteristics and manifestations of communication disorders, and educational neuroscience research concerning first and second language acquisition. The student will learn

about effective strategies and accommodations that can be used in planning instruction for P - 12 students with speech and language disorders and differences. Pre/Co-requisites: EDG3321. (3 hr. lecture)

EEX3226
Assessment of All Young Children
3.00 credits

The student will utilize guidelines and techniques for observing, assessing, evaluating, and planning curriculum for young children. The student will use formal and informal assessments to evaluate social/emotional, cognitive, language, and motor development; and will use data to plan for instruction. (Ten hours of clinical experience required: 3 hours to include an observation of an evaluation of a young child at Early Steps, 3 hours to include a tour of the Mailman Center, Early Steps, and the FFAST Lab, and the remaining 4 hours are to be completed in an approved kindergarten-third grade inclusion setting with ESOL students). Prerequisites: EDF3115, EEC3301. Pre-requisites: EEC2601, EEC2271; Pre/Co-requisites: EDF3115, EEC3301. Special Fee. (3 hr. lecture)

EEX3603
Positive Behavior Supports in
Inclusive Settings
3.00 credits

This course provides a holistic approach in guiding young children's behavior. The student will learn to utilize strategies that emphasize the importance of relationships to learning, self-awareness, and pro-social behaviors focusing on individual needs of each child. (Ten hours of clinical experience required in an approved pre-kindergarten inclusion setting.). Pre-requisites: EEC2271. Special Fee. (3 hr. lecture)

EEX4012
Introduction to Brain-Based Teaching
Strategies
1.00 credits

The student will learn how the brain processes information and how to best engage the brain during learning. In this overview course, the student will acquire research-based, brain-friendly strategies that focus on students with disabilities, English lan-

guage learners, reading, and mathematics. (1 hr. lecture)

EEX4024
Legal Issues for Working with
Students with Exceptionalities
3.00 credits

The student will learn about the history, governing legislation, and current status of special education in the US. Through case analyses and simulations, the student will correlate and evaluate P-12 classroom and administrative practices and issues with current legislation and mandates. (3 hr. lecture)

EEX4034
Introduction to Special Education
1.00 credit

The student will identify nature and needs of students with exceptionalities (excluding gifted). The student will learn about legislation and litigation related to special education, characteristics and classifications of the various exceptionalities, assessments and interventions, continuum of services, and the impact of family and community involvement on students with exceptionalities. (1 hr. lecture)

EEX4221
Assessment in Special Education
3.00 credits

The student will study, analyze, and administer informal and formal assessments to K-12 learners with special needs. The student will learn to prepare and present assessment data for use in instructional planning and developing individualized educational plans for K-12 learners with disabilities. Pre-requisites: EDG3321, and EDF4430. Special Fee. (3 hr. lecture)

EEX4264
Curriculum and Instructional
Strategies for Students with
Disabilities K-5
3.00 credits

This course focuses on specialized methods for the creation of instructional curricula and appropriate pedagogic methods for students with disabilities in grades K-5. The development of curricula and the use of instructional approaches that correspond

to the capabilities and styles of the various learners will be emphasized. This course meets the guidelines of the Educator Accomplished Practices, and incorporates The Council for Exceptional Children's Content Standards for All Beginning Special Education Teachers. A minimum 20 hours of structured field experience required. Prerequisites: EDF 3214, EEX 3111. (3 hr. lecture)

EEX4265
Curriculum and Instructional Strategies for Students with Disabilities 6-12
3.00 credits

This course focuses on specialized methods for the creation of instructional curricula and appropriate pedagogic methods for students with disabilities in grades 6-12. The development of curricula and the use of instructional approaches that correspond to the capabilities and styles of the various learners will be emphasized. This course meets the guidelines of the Educator Accomplished Practices, and incorporates the Council for Exceptional Children's Content Standards for All Beginning Special Education Teachers. A minimum 20 hours of structured field experience required. Prerequisites: EDF3214, EEX 3012. (3 hr. lecture)

EEX4294
Differentiated Instruction in Mixed-Ability Classrooms
3.00 credits

The student will learn the educational neuro scientific basis for providing differentiated instruction in mixed-ability classrooms. The student will utilize research-based instructional and assessment strategies to create differentiated instruction to meet the needs of all learners in P-12 classrooms. (3 hr. lecture)

EEX4601
Effective Behavioral Practices & Interventions in Exceptional Student Education
3.00 credits

This course is designed to familiarize the students with the educational management of exceptional learners. Emphasis

is on behavior practices and consultation skills leading to students managing their own behavior. Strategies to create and maintain safe, healthy environments for learning in exceptional and inclusive classrooms are presented. Students will demonstrate the Educator Accomplished Practices in this course. The Council for Exceptional Children's Content Standards for all Beginning Special Education Teachers are addressed. Prerequisites: EDF 3111, EEX 3012. (3 hr. lecture)

EEX4614
Conflict Resolution
3.00 credits

This course emphasizes techniques and procedures designed to assist individuals in their development as self-directed problem solvers. Students will learn ways to assess and de-escalate conflict situations utilizing a cross-cultural perspective and research-based techniques. A conflict resolution program will be developed for implementation at the organizational or school site. (For Recertification Only)

EEX4833
Practicum in Special Education
3.00 credits

The student will plan, develop, and implement literacy pedagogic methods that meet the needs of a diverse population of K-12 learners. The student will learn to utilize action research methodology, assessment principles, educational neuroscience research, and best practices to determine the effectiveness of a literacy strategy. Sixty hours of clinical experience are required. Pre-requisites: EDF4430, EDG3321, EDG4376, EEX3071, EEX3120, RED3393, and TSL3243; Pre/Co-requisites: EEX4221 or, MAE4360 or, RED4519 or, SCE4362 or, TSL4311. (144 hr. Practicum)

EEX4930
Seminar in Special Education
3.00 credits

The student will engage in professional dialogue and explore professional development opportunities related to teaching students with exceptionalities. This seminar course is taken in conjunction with a full time, supervised teaching experience and provides an opportunity to exam-

ine and reflect on the daily experiences of becoming a highly effective teacher. Co-requisites: EEX4940. (3 hr. lecture)

EEX4931
Introduction to Autism Spectrum Disorders
1.00 credit

The student will identify the legislation associated with Autism Spectrum Disorders (ASD), discuss the characteristics of ASD, understand the nature and needs of ASD, identify positive behavioral interventions, appropriate curricula and assessment modifications, as well as discuss the impact of home, school, and community relationships on students with ASD. (1 hr. lecture)

EEX4940
Internship in Special Education
9.00 credits

The student will engage in the educational and professional responsibilities common to teachers in exceptional student education. This internship experience reinforces and augments teaching strategies that students have developed through their coursework and clinical experiences. Students participate in a full time, supervised teaching experience. Co-requisites: EEX4930. (432 hr. Internship)

EEX4992
Brain-Based Teaching: The Exceptional Brain
3.00 credits

The student will learn how the typical and atypical brain processes information. The student will acquire research-based and best practices for teaching, differentiating instruction, and assessing P-12 students with and without identified exceptionalities. (3 hr. lecture)

MAE4360
Methods of Teaching Mathematics
3.00 credits

The student will utilize theory and educational neuroscience research in developing knowledge and pedagogy essential for K-12 mathematics instruction which accommodates the needs of diverse learners. The problem-solving approach will be used to design, implement, and assess mathematics instruction and curriculum. Fifteen

hours of clinical experience are required. Pre-requisites: EDG3321; Pre/Co-requisites: EDF4430. Special Fee. (3 hr. lecture)

MAE4940

Advanced Topics in Mathematics Education Practicum

3.00 credits

The student will plan and implement mathematics instruction that meets the needs of a diverse population of learners. The student will learn to utilize action research methodology, assessment principles, educational neuroscience research, and best practices to identify and address issues related to mathematics learning in grades 6-12. Sixty hours of clinical experience are required. Special Fee. (432 hr. Practicum)

MAE4942

Seminar in Mathematics Education

3.00 credits

The student will engage in professional dialogue and explore professional development opportunities related to teaching in the secondary science setting. This seminar course is taken in conjunction with a full time, supervised teaching experience and provides an opportunity to examine and reflect on the daily experiences of becoming a highly effective teacher. Co-requisites: MAE4945. Special Fee. (3 hr. lecture)

MAE4945

Internship in Mathematics Education

9.00 credits

The student will engage in the educational and professional responsibilities common to teachers in the secondary mathematics classroom. This internship experience reinforces and augments teaching strategies that students have developed through their coursework and clinical experiences. Students participate in a full-time, supervised teaching experience. Co-requisites: MAE4942. (432 hr. Practicum)

MHF4404

History of Mathematics

3.00 credits

A study of the development of mathematics from ancient civilizations to the present time. Prerequisite: MAC 2312 or approval of department. (3 hr. lecture)

SCE4362

Methods of Teaching Science

3.00 credits

The student will learn to design and implement science instruction utilizing the national framework for K-12 science education and educational neuroscience to provide all students with high-quality science education. The student will learn about the theoretical knowledge and skills essential for facilitating science instruction in a variety of classroom settings. Fifteen hours of clinical experience are required. Pre/Co-requisites: EDF4430. Special Fee. (3 hr. lecture)

SCE4363

Advanced Topics in Science Education Practicum

3.00 credits

The student will design, implement, and examine the alignment of their personal instructional practices to the national framework for K-12 science education utilizing the action research process. The student will focus on identifying, analyzing, and addressing misconceptions in science in grades 6-12. Sixty hours of clinical experience are required. Pre-requisites: EDF4430, EDG3321, RED3393, SCE4362, TSL4324C; Pre/Co-requisites: EEX3071, SCE3893. (144 hr. Practicum)

SCE4943

Seminar in Science Education

3.00 credits

The student will engage in professional dialogue and explore professional development opportunities related to teaching in the secondary science setting. This seminar course is taken in conjunction with a full time, supervised teaching experience and provides an opportunity to examine and reflect on the daily experiences of becoming a highly effective teacher. Co-requisites: SCE4945. Special Fee. (3 hr. lecture)

SCE4945

Internship in Science Education

9.00 credits

The student will engage in the educational and professional responsibilities common to teachers in the secondary science classroom. This internship experience rein-

forces and augments teaching strategies that students have developed through their coursework and clinical experiences. Students participate in a full time, supervised teaching experience. Co-requisites: SCE4943. (432 hr. Internship)

Education: American Sign Language and ASL Interpretation

INT1000

Interpreting Ethics and Professionalism

3.00 credits

The course provides an overview of the career of sign language interpreter. Included are the interpreter's role and responsibilities, Code of Ethics issues, evaluation systems for determining competency and logistical considerations. Various statutes will be examined with regard to their implications for interpreting and related services. These include The American with Disabilities Act (ADA), the education for all Handicapped Children Act and the Rehabilitation Act. Prerequisites: ASL 1150C, 1000. (3 hr. lecture)

INT1202

Sign to Voice Interpreting

3.00 credits

In-depth discussion and application of techniques and principles for interpreting legal, medical, oral and deaf/blind situations. Prerequisites: ASL 2160C, INT 1240. (3 hr. lecture)

INT1240

Voice to Sign Interpreting

3.00 credits

In-depth discussion and application of techniques and principles for interpreting situations in educational, social service, free-lance interpreting and the business aspects of interpreting. Prerequisites: ASL 2160C, INT 1000. (3 hr. lecture)

INT1400

Educational Interpreting

3.00 credits

Provides an overview of the field, including the role and responsibilities of edu-

cational interpreters, their working conditions and related issues. Also covered are evaluation systems for educational interpreters and the Florida Educational Code of Ethics. Opportunities for skill building will be included with emphasis placed on signing with conceptual accuracy, mastering various sign systems and developing expertise in the use of technical signs. Prerequisite: INT1000. (3 hr. lecture)

INT1480

Interpreting: Special Settings & Populations **3.00 credits**

The course examines various settings in which interpreters work. These include social service and rehabilitation, employment-related, mental health and substance abuse treatment, religious, performing arts, legal and other settings. Also considered are specific deaf and hard of hearing consumers who present unique challenges for interpreters such as oral deaf persons, people who are both deaf and blind and those who would be classified as having minimal language skills (MLS). The course includes lecture and skill building opportunities. Prerequisites: ASL 2160C, INT 1000. (3 hr. lecture)

INT1941

Interpreting Internship **6.00 credits**

This course includes field observation and supervised practical interpreting experience in a one-to-one or small group interpreting situation in the community. The student is assigned to an experienced, certified practicing interpreter who acts as a mentor for the duration of the internship. A minimum of 288 hours is spent in the internship experience. This includes meetings with college faculty and the interpreter/mentor. Prerequisites: All courses in the subject major must have been completed prior to enrolling in this course. (288 hr. Internship)

Emergency Medical Services

EMS1059

1st Responder Emergency Care **1.00 credits**

1st Responder Emergency Care is an entry-level emergency medical provider course that provides training in emergency medical care for those who may be first to respond to an accident or illness. The course meets the basic requirements of the U.S. Department of Transportation. Prerequisite for EMT, Co-requisite EMS 1059L. Special fee. (2 hr. lecture)

EMS1059L

1st Responder Emergency Care Laboratory **2.00 credits**

1st Responder Emergency Care Laboratory is a hands on entry-level emergency medical provider course that provides training in emergency medical care for those who may be first to respond to an accident or illness. The course meets the basic requirements of the U.S. Department of Transportation. Pre-requisite for EMT, Co-requisite: EMS 1059. A.S. Degree credit only (2 hr. lab)

EMS1119

Emergency Medical Technician **4.00 credits**

A review of basic life support theory. Areas of emphasis include the prehospital environment, preparatory information, patient assessment, medical emergencies, behavioral emergencies, OB/GYN emergencies, trauma emergencies, pediatric emergencies and EMS operations. Pre-requisite EMS1059, EMS1059L, Corequisites: EMS 1119L, EMS 1431. (4 hr. lecture)

EMS1119L

Emergency Medical Technician Lab and Clinic **3.00 credits**

Practical application of the content covered in EMS 1119 with an emphasis on cardiopulmonary resuscitation, splinting, bandaging, patient movement, and other skills as recommended by the U.S. Department

of Transportation for the EMT level practitioner. Pre-requisite EMS1059, EMS1059L, Corequisites: EMS 1119, 1431. Laboratory fee. (96 hr. lab)

EMS1431

EMT Hospital/Field Experience **3.00 credits**

Practice in local emergency departments and rescue agencies under professional supervision. This course meets the skills recommended by the U.S. Department of Transportation. Corequisite: EMS 1119, 1119L. (9 hr. clinic)

EMS2311

Emergency Medical Operations **3.00 credits**

Advanced theory of management operations currently used nationally by comprehensive emergency medical service systems. Legal issues as related to various aspects of the system, personnel policies, provider versus client roles, disaster planning, communications, budgeting and evaluation of the system will be discussed. Prerequisite: MNA 1345. (3 hr. lecture)

EMS2601

Paramedic Lecture 1 **8.00 credits**

EMS2601 is the first course in the sequence necessary for completion of the Paramedic Certificate program. The course is designed to reinforce concepts and clinical skills learned at the EMT level and to integrate this knowledge beginning with advanced life support concepts and skills. Emphasis is placed on EMS systems, illness and injury prevention, medical-legal issues, patient assessment, airway management and ventilation, pathophysiology, pharmacology, shock, decision-making, and the management of trauma related injuries. This course includes Modules 1-4 of the 1998 DOT National Standard Curriculum for Paramedic Programs. Prerequisites: EMS 2601L, 2664. (8 hr. lecture)

EMS2601L

Paramedic Laboratory 1 **4.00 credits**

A review of basic life support practice and an introduction to advanced life support

practice. Areas of emphasis include the patient assessment, trauma emergencies, obstetric emergencies, gynecological emergencies, pediatric emergencies and psychiatric emergencies. Students will be expected to master the techniques of patient assessment, intravenous techniques and endotracheal intubation. Corequisite: EMS 2601, 2664. Laboratory fee. (8 hr. lab)

EMS2602
Paramedic Lecture 2
8.00 credits

EMS 2602 is the second course in the sequence necessary for the completion of the Paramedic Certificate Program. This course is designed to reinforce and expand upon the material and skills learned in Paramedic 1 level and to integrate prior learning with enhanced life support concepts and skills. Emphasis is placed on patient assessment and recognition of significant findings, pre-hospital diagnosis and differential diagnosis, treatment strategies, anatomy and physiology, pathophysiology, and the management of various emergencies, patients with special challenges, assessment based management, and EMS operations. This course includes Modules 5-8 of the 1998 DOT National Standard Curriculum for Paramedic Programs. Prerequisites: EMS 2602L, 2665; corequisites: EMS 2601, 2601L, 2664. (8 hr. lecture)

EMS2602L
Paramedic Laboratory 2
4.00 credits

Continuation of advanced life support practice. Areas of emphasis include the patient assessment, trauma emergencies, obstetric emergencies, gynecological emergencies, pediatric emergencies and psychiatric emergencies. Students will be expected to master the techniques of patient assessment, intravenous techniques, endotracheal intubation, and advanced life support. Corequisites: EMS2602, 2665. Laboratory fee. (8 hr. lab)

EMS2659
EMS-Field Internship and Conference
8.00 credits

A supervised clinical experience on an advanced life Support (ALS) vehicle. The

student obtains increasing patient care responsibilities as a working member of the EMS team under the direct supervision of a designated preceptor. Prerequisites: EMS 2601, 2601L, 2602, 2602L, 2664, 2665. (24 hr. clinic)

EMS2664
PARAMEDIC CLINIC 1
3.00 credits

EMS 2664 is designed to allow the students "hands-on" practice of the skills and theories learned in EMS 2601 and 2601L. Clinical experience will take place in many areas including the emergency department, operating room and medical examiner's office. All patient care experience will be practiced under the direct supervision of a medical professional (Paramedic, Nurse, Physician, etc.). Corequisites: EMS 2601L, 2601. (9hr. lab)

EMS2665
Paramedic Clinic 2
3.00 credits

EMS 2665 is designed to allow the students "hands-on" practice of the skills and theories learned in EMS 2602 and 2602L. Clinical experience will take place in many areas including the emergency department, operating room and critical care unit. All patient care experience will be practiced under the direct supervision of a medical professional (paramedic, Nurse, Physician, etc.). Corequisites: EMS 2602, 2602L. (9 hr. lab)

Engineering - General

EGN1008C
Introduction to Engineering
3.00 credits

An introduction to the opportunities, challenges, and required skills of the engineering profession. Students explored the different disciplines of engineering, their function in industry, and required education. Professional issues such as registration, ethics, safety, and design are discussed. Projects and activities are used to develop problem solving, communication and computer skills (word-processing, spreadsheets, presentations, mathematical analysis, email, Internet). (3 hr. lecture)

EGN1949
CO-OP WRK EXP 1
1.00 - 4.00 credits

This is a capstone course designed for students majoring in engineering programs. Students will learn to apply the skills and knowledge that they have acquired through their program of study in a real work environment. Prerequisite: Successful completion of required program course work and department approval. (1-4 hr. lecture)

EGN2200
Computer Applications in Engineering
3.00 credits

An introduction to fundamental concepts and skills of mathematical programming and computer-aided design. This course explores the use of computer software to solve engineering problems and bring ideas from a concept to a model. Pre/Co-requisite MAC1114 or MAC1147. (2 hr. lecture 2 hr. lab)

EGN2312
Engineering Mechanics - Statics (With Vectors)
4.00 credits

This is a foundation course in engineering mechanics. Students will learn the basic principles of statics covering resultants, equilibrium, trusses, frames, friction, centroids and moments of inertia with vector notation and calculus. The content prepares students for further study in engineering dynamics. Prerequisites: MAC 2312, PHY 2048. Laboratory fee. (3 hr. lecture; 2 hr. lab)

EGN2322
Engineering Mechanics - Dynamics
4.00 credits

This course provides students with the skills they need to analyze and solve problems involving bodies in motion through the application of vector mechanics and Newton's laws. Students will learn kinematics, kinetics, energy of particles, rigid bodies in 2-D and 3-D motion, and vibrations. Pre/Corequisite: MAC2313. (3 hr. lecture 2 hr. lab)

EGN2949
CO-OP WRK EXP 2
1.00 - 3.00 credits

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. (3 hr. Lecture)

EGN2990
CO-OP WRK EXP 3
3.00 credits

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. (3 hr. Lecture)

EGN2991
CO-OP WRK EXP 4
3.00 credits

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. (3 hr. Lecture)

EGS1010
Applied Research Methods
1.00 - 3.00 credits

This course is designed for STEM majors. Students will learn basic research practices: research methods, experimentation,

validation, technical writing, and presentations. Using the Affinity Research Group model, students will work in groups to conduct theory-based STEM research, develop poster presentations, and write conference and journal publications. (1-3 hr. lecture)

Engineering Technology Civil

ETC2450
Concrete Construction
3.00 credits

The use of concrete in construction to include foundations, columns, beams, slabs, hydraulic conduits. Prerequisite: ETG 2502. (3 hr. lecture)

Engineering Technology Drafting

ETD1110
Technical Drawing 1
4.00 credits

Introduces students to the principles of instrument drawing, orthographic projection, visualization, specialized computer processes and introductory computer aided drawing (CAD). Students develop drawing and sketching techniques common to industry. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ETD1340
Computer Aided Drawing & Design
3.00 credits

This course is recommended for all engineering students as an introduction to the basic concepts of drafting and designing using a computer. Students will learn industry standard drafting and design practices using AutoCAD in a laboratory environment. Pre/Corequisite: MAC1105. (2 hr. lecture, 2 hr. lab)

ETD1542
Structural Drafting
4.00 credits

Development of structural, fabrication and erecting drawings. Course involves study of structural shapes, their properties,

and methods of developing connections, as well as study of common reinforced concrete practices. Prerequisite: ETD 1110. Laboratory fee. (2 hr. lecture; 4 hr. lab)

Engineering Technology Electrical

CET1110C
Digital Circuits
4.00 credits

This course is intended for students majoring in Electronics or Computer Engineering Technology. Students will learn how to apply electronic principles to digital computer circuits and systems. Students will also learn how to simplify logic circuits, build digital circuits, and perform other laboratory activities. Prerequisite: EET1015C, MAC1105. Pre/corequisite: COP2270. Special Fee. (2 hr. lecture; 4 hr. lab)

CET1171
Introduction to Computer Service and Maintenance
3.00 credits

This course is designed as an introduction for students new to IT. Students will learn about the history, design, construction, and maintenance of microcomputers, including the proper handling and use of computer components and tools; how to assemble and disassemble computers; how to perform preventive maintenance; how to identify and upgrade components; how to interpret error messages, and how to perform basic troubleshooting. Laboratory fee. (3 hr. lecture)

CET1178C
A+ Computer Hardware Service
3.00 credits

This is an intermediate level course that prepares students for A+ hardware certification. Students will learn how to: install, configure, and upgrade components diagnose and troubleshoot computer systems, identify, test, and troubleshoot motherboards, processors, memory, and printers, and connect network equipment. Prerequisite: CET1171. Special fee. A.S. credit only. (3 hr. lecture)

CET1487C**Network+
3.00 credits**

This is an intermediate level course designed for students preparing for the hardware component of the Network+ certification. Students will learn how to install, configure, manage, troubleshoot and upgrade network devices including network interface cards, switches, hubs, wireless access points, routers, and patch panels. They will also learn about the construction, installation, testing and repair of the physical layer of the network, including wired cables, fiber optic media, wireless transmitters and antennas. Demonstrated knowledge of microcomputer fundamentals and system components is required. Recommended Preparation: CET1178C or A+ certification. Laboratory fee. (2 hr. lecture; 2 hr. lab)

CET2113C**Advanced Digital Circuits
4.00 credits**

This is a second level course in digital circuits for students majoring in electronics and related engineering technologies that extends the application of sequential and combinational logic circuits and other digital applications. Students will learn to program, operate, and interface with a micro-computer and its elements. Prerequisite: CET1110C, COP2270. Pre/Co-requisite: EET1141C. Laboratory fee. (2 hr. lecture; 2 hr. lab)

CET2123C**Microprocessors
4.00 credits**

This course is intended for students majoring in Electronics or Computer Engineering Technology. Students will learn to apply digital principles to the understanding of microprocessor parameters and characteristics (addressing range and models, instruction set, architecture, input/output, interrupts, and programming). Students will build practical microprocessor and/or microcontroller based systems to perform a variety of engineering applications. Prerequisite: CET 1110C and COP 2270. Special Fee. (2 hr. lecture, 4 hr. lab)

CET2186C**Design and Prototyping of Connected Devices
4.00 credits**

This course provides the student with the foundational concepts to integrate hardware and software to produce prototypes of connected devices. As part of the course, the student will develop creative thinking and problem-solving skills to design Internet of Things solutions by combining existing hardware and software tools. Prerequisite: COP1334. (2 hr. lecture, 4 hr. lab)

CET2369C**Embedded Programming
4.00 credits**

This course is intended for students majoring in Computer Engineering Technology, Electronics Engineering Technology, or any engineering discipline. Students will learn how to use object oriented programming to analyze, design and code programs to solve engineering related hardware problems. Pre/Corequisite: MAC1105. (3 hr. lecture; 2 hr. lab)

CET2588C**Server + Service and Maintenance
3.00 credits**

This course is designed for students preparing for the hardware component of the Server + certification. Students will learn how to install, configure, and upgrade workstations and servers, configure and test network and peripheral equipment, and diagnose and troubleshoot advanced computer systems. Laboratory fee. College readiness in reading and math required. Recommended Preparation: CET1178C or A+ certification. Special fee. (3 hr. lecture)

CET2664C**Electronic Security
4.00 credits**

This is an introductory electronic security course for students who are studying cybersecurity, electronics or computer engineering technologies. The student will study information and communication security in computer systems and networks. Both information flow and information integrity policies will be considered.

Topics will include authentication, protection, security models, cryptography, applications, and public policy, along with case studies. Prerequisite: COP2270, CET2369C (2 hr. lecture 4 hr. lab)

CET2880C**Digital Forensic
4.00 credits**

This is an introductory digital forensics course for students who are studying cybersecurity, electronics or computer engineering technologies. In this course, students will learn the setup and use of an investigator's laboratory, how to perform data acquisition, web forensics, email forensics, mobile forensics, network analysis, and file recovery. (3 hr. lecture; 2 hr. lab)

CET3126C**Advanced Microprocessors
ETD4.00 credits**

This course is intended for upper division students majoring in Electronics Engineering Technology. This course introduces the study of advanced microprocessor design. Students will learn the basic organization of computer systems including instruction-set architecture, execution pipeline, memory hierarchy, virtual memory, and I/O subsystems. Students also learn advanced processor microarchitecture issues such as dynamic instruction scheduling, branch prediction, lock-up free caches, instruction-level parallelism, multiple instruction fetch/issuing, speculative execution, etc. to improve computer processor performance. Students will experimentally verify microarchitecture designs using industry standard microarchitecture simulators. Prerequisite: CET2113C, CET2123C. (2 hr. lecture 4 hr. lab)

CET3383C**Software Engineering
4.00 credits**

This upper division course is for students majoring in B.S. in Information Systems Technology or B.S. in Electrical and Computer Engineering Technology. The student will learn the basic principles and concepts of software engineering; system requirements; modeling and testing; object oriented analysis and design; testing and validation; configuration management; and

the analysis, design and programming of extensible software systems. Prerequisite: CET2369C or COP2800. (2 hr. lecture, 4 hr. lab)

CET4190C
Applied Digital Signal Processing
4.00 credits

This is an upper division level course for students majoring in electronics engineering technology. Students will learn how to model digital signal processing (DSP) systems, apply the Z transform, and develop algorithms for convolution, correlation, the Discrete Fourier Transform (DFT), and the Fast Fourier Transform (FFT). Students will apply these concepts in the design and implementation of digital filters and DSP algorithms in an embedded system. Prerequisite: COP 2270, EET 4732C, and EET 232323C, or EET 2351C. Special Fee. (2 hr. lecture, 2 hr. lab)

CET4663C
Electronic Security
3.00 credits

This is an upper division course for students who are majoring in electronics engineering technologies. The student will learn information and communication security principles for computer systems and networks including authentication, protection, security models, cryptography, applications, and public policy, along with case studies. Prerequisite: CET2123C, COP2270. (2 hr. lecture, 2 hr. lab)

EET1015C
Direct Current Circuits
4.00 credits

This course is intended for students majoring in electronics engineering technology and related disciplines. Students will learn basic electrical safety, the various basic electrical components and resistive circuit network analysis. Students will learn to verify and apply basic theories and principles through hands-on, laboratory experiments utilizing modern testing equipment. Prerequisite: MAC 1105. Special Fee. (2 hr. lecture, 4 hr. lab)

EET1025C
Alternating Current Circuits
4.00 credits

This course is intended for students majoring in electronics engineering technology and related disciplines. Students will learn inductance, capacitance, vector notation, AC circuits, impedance, phase shift, networks, transformers, and resonance. Students will apply and verify theories and principles through hands-on, laboratory experiments utilizing modern testing equipment. Prerequisite: EET 1015C; Pre/Corequisite: MAC 1114 or 1147. Special Fee. (2 hr. lecture, 4 hr. lab)

EET1033C
Electrical Fundamentals
4.00 credits

This course is designed for students obtaining a CCC or AS degree in Engineering Technology, and related disciplines. The student will learn the basic concepts of electronics principles including Direct Current, Alternating Current, Series and Parallel circuits topologies, Basic electronics components, electronics measure tools and software simulation tools. Laboratory fee. (2 hr. lecture, 4 hr. lab)

EET1037C
Electronic Computer Simulations
3.00 credits

An investigation of network theorems with practical illustrations. Thevenin's, Norton's, Kirchhoff's and the superposition methods of analysis are applied to the solution of resistive and reactive networks. Resonant circuits and transient voltages and currents are analyzed. Prerequisite: EET 1141C; Corequisite: MTB 1322 (3 hr. lecture)

EET1082
Introduction to Electronics
3.00 credits

Learn by building practical electronic circuits. Survey course suitable for both majors and non-majors. Instructor and tutors available to assist in project completion. Topics include: schematics, pictorials, amplifiers, oscillators, burglar alarms, radios, digital circuits. Students will develop individual career plans and learn about

employment opportunities within the field. (3 hr. lecture)

EET1141C
Electronics 1
4.00 credits

This course is intended for students majoring in Electronics Engineering Technology or related fields. Students will learn how to apply electronic principles to analog circuits and systems, including semiconductor diodes, applying the fundamental theory of transistors and other solid-state devices; analysis of amplifiers, oscillators, and other applications using a sinusoidal wave. Students also learn basic safety procedures to follow when working in an electronics laboratory and with electronic circuits and systems. Prerequisite: EET1025C and MAC 1114 or MAC 1147. Special Fee. (2 hr. lecture, 4 hr. lab)

EET2101C
Electronics 2
4.00 credits

This course is intended for students majoring in electronics or computer engineering technologies. Students will learn how to apply electronic principles to analog circuits including transistor amplifiers, feedback and frequency response of linear circuits, operational amplifiers, MOSFET and oscillators. Prerequisite: EET 1141C. Special Fee. (2 hr. lecture, 4 hr. lab)

EET2323C
Analog Communications
4.00 credits

This course is designed for students majoring in Electronics Engineering Technology, Telecommunications Engineering Technology, and related disciplines. Students will learn the principles of radio wave transmission and reception, including AM and FM transmitters, receivers, single sideband, television and digital data transmission lines, wave propagation antennas and microwaves. Prerequisite: EET 1141C. Special Fee. (2 hr. lecture, 4 hr. lab)

EET2351C
Digital and Data Communications
4.00 credits

This course is intended for students majoring in Electronics or Computer Engineering Technology. It provides a theoretical and practical background in the basic concepts and applications of digital and data communications. Students will learn analog-to-digital (A/D) and digital-to-analog (D/A) conversions; data communications codes and standards; wired and wireless digital communications; modulation, transmission impairment, the telephone system, modems, multiplexers, and electrical interface standards. Prerequisite: CET 2123C. Special Fee. (2hr. lecture, 4 hr. lab)

EET2515C
Motors and Generators
3.00 credits

This course is designed for students specializing in industrial equipment maintenance. Students learn how to analyze, troubleshoot, and repair rotating electric machinery with emphasis on industrial applications. Students learn terminology specific to motors, generators, and transformers; electromechanical device theory; circuits connecting electromechanical devices to voltage sources and loads; and how to apply mathematical analysis to determine quantitative circuit functioning in terms of voltage, current, and power. Prerequisite: EET 1025C. corequisite: EET 1141C. Special fee. (2 hr. lecture; 2 hr. lab)

EET2527C
Motor Starters, Controllers, and Breakers
3.00 credits

This course is designed for students specializing in industrial equipment maintenance covering AC and DC power distribution in the plant. Students learn operating principles, troubleshooting, repair, and maintenance of switch gear, motor control centers, breaker panel power, control, and instrument cable, raceways, protective devices and grounding as related to the generating station. Hands-on, laboratory exercises reinforce each major concept studied. Prerequisites: EET 1141C, EET 2515C. Special fee. (2 hr. lecture; 2hr. lab)

EET2547C
Transformers and Power Distribution
3.00 credits

This course is designed for students specializing in industrial equipment maintenance. Students acquire an understanding of the components and devices used to distribute power, and how to protect major elements involved in power distribution. Students learn about the uses and maintenance of fuses, circuit breakers, enclosures, and relay coordination; how to protect against lightning and other abnormal conditions; and the protection of transformers, motors, and generators. Prerequisite: EET 2515C; Corequisite: EET 2527C. Special fee. (2 hr. lecture; 2 hr. lab)

EET3716C
Advanced System Analysis
4.00 credits

This is an upper division level course for students majoring in electronics engineering technology designed to prepare students to perform electrical circuit systems analysis using Laplace transform and partial fraction expansion. Students will learn theorems, Fourier series, frequency response and bode plots, and their application towards practical systems. Prerequisite: EET 1025C and MAC 2312. (2 hr. lecture, 4 hr. lab)

EET4158C
Linear Integrated Circuits and Devices
4.00 credits

This is an upper division level course for students majoring in electronics engineering technology designed to provide students with practical skills and knowledge needed for application of operational amplifiers, comparators, phase-locked loops, timers, regulators, other integrated circuits in electronic systems. Students learn to apply these skills towards the design of amplifiers, active filters, oscillators, differentiators, integrators and other miscellaneous integrated circuit based systems. Prerequisite: EET 3716C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

EET4165C
Senior Design 1
3.00 credits

This project-based course is designed to synthesize students' knowledge of the analysis, design, manufacturing, and testing of electronic systems. Students will design experiments, explore professional ethics, practice professional oral and written communications, conduct project feasibility studies, and perform project scheduling. Students learn about human factors, intellectual property, and liability issues. Department approval required. Laboratory fee. (1 hr. lecture; 4 hr. lab)

EET4166C
Senior Design 2
2.00 credits

Senior Design 2 is a project-based experience course in which students apply all of the skills they have acquired to analyze, design, simulate, synthesize, and test a complete system. Prerequisite EET 4165C. Special fee. Department approval required. (1 hr. lecture; 2 hr. lab)

EET4730C
Feedback Control Systems
4.00 credits

This upper division course for students majoring in electronics and computer engineering technology, is designed to introduce students to the analysis of circuit networks and control systems. Students learn about stability and compensation considerations, using root locus, the Nichols chart, and Bode plots; simulation techniques; and how to apply these principles to build and test control systems. Prerequisite: EET 3716C. (2 hr. lecture, 4 hr. lab)

EET4732C
Signals & Systems
4.00 credits

This course is intended for upper division students majoring in Electronics Engineering Technology. Students will learn the theory and the mathematical techniques used in analyzing continuous-time linear systems. Students will learn continuous-time signal and systems analysis, the input-output relationships of linear time-invariant (LTI) systems, transient and

steady state analysis, frequency domain analysis and Fourier analysis. Students will analyze and characterize LTI systems using Laplace transforms. Prerequisite: EET 3716C. (2 hr. lecture 4 hr. lab)

ETI1000
Industrial Plant Tools and Equipment
1.00 credits

Students will learn the knowledge and skills necessary to properly select, inspect, use, and care for the tools, test equipment, and lifting/handling equipment commonly used in the performance of assigned tasks in an industrial plant setting. Special fee. (2 hr. lab)

ETI1151C
Mechanical Measurement & Instrumentation
3.00 credits

This course provides the basic foundation for mechanical measurement techniques used in manufacturing environments. Students will learn to integrate the concepts, principles, and techniques of mechanical measurement with the use of various types of instruments including micrometers, verniers, calipers, gages, and other types of measuring equipment (2 Hr. Lecture; 2 Hr. Lab)

ETI1701
Industrial Safety
3.00 credits

This course provides the student with the knowledge and skills to recognize hazardous situations in industrial plants and the precautions to be observed and practiced to perform work activities safely. Among the topics covered are industrial safety hazards, electrical safety, working with chemicals, gases, and solvents, protective equipment, and safe working conditions. (3 hr. lecture)

ETI1805C
Introduction to Lifting and Rigging
3.00 credits

This course provides knowledge and skills required by students preparing for careers in industrial maintenance of heavy equipment. Students learn how-to determine rigging requirements for lifts, select equipment, calculate loads and safely operate different types of lift equipment.

Prerequisites: ETI 1701, ETP 1230. Special fee. (2 hr. lecture, 2 hr. lab)

ETI2315C
Fluid/Pneumatic Instrumentation
3.00 credits

This course is designed for student's specializing in industrial equipment maintenance. Students will learn to apply the basic principles and operation of hydraulic and pneumatic instrumentation and testing equipment to repair equipment. Laboratory experiments are performed with extensive hands-on application. Prerequisite: MAC 1105. Special fee. (2 hr. lecture; 2 hr. lab)

ETI2408C
Welding Processes
3.00 credits

This course is designed for students who require basic welding process skills to prepare themselves for entry-level maintenance technician positions. The student learns principles of welding safety, fundamental practices of shielded arc welding, arc welding with consumable and non-consumable electrodes, brazing, soldering, and plasma cutting. Prerequisite: ETI 2425C. Laboratory fee. (2 hr. lecture; 2 hr. lab)

ETI2425C
Metallurgical Properties and Dynamics
3.00 credits

This course provides students who are preparing for occupations in industrial maintenance with a foundation in the principles of the metallurgy of steel. Students learn about the thermal, physical and chemical properties of steel. Prerequisite: PHY 1025. Special fee. (2 hr. lecture; 2 hr. lab)

ETI2451C
Mechanical Maintenance for Power Plants
3.00 credits

This course is designed for students who are preparing for mechanical and industrial maintenance operations. Students learn how to read and interpret drawings and blueprints, the application of lubrication principles, how to perform torque procedures, and the correct procedures for maintaining sealants, O-rings, and gaskets in

power plant environments. Prerequisite: ETI 2231C. Laboratory fee. (2 hr. lecture; 2 hr. lab)

ETI2670
Engineering Economic Analysis
3.00 credits

This course is designed for students who are majoring in any engineering discipline. Students will learn the basic methods of engineering cost analysis including equivalence, value measurement, interest relationships and decision support theory and techniques as applied to capital projects. Various problem solving methods will be used for decision making, multiple alternatives and uncertainty. Prerequisite: MAC1105. (3 hr. Lecture)

ETI3671
Technical Economic Analysis
3.00 credits

This course is designed to cover the formulation and application of analytical techniques to reach cost effective solutions to engineering problems. Students will learn time based analysis of selection, replacement, and lease-or-buy decisions including multiple alternatives, uncertainty, and sensitivity analysis, using a problem-solving approach. Prerequisite: MAC 1105. (3 hr. lecture)

ETI4480C
Applied Robotics
4.00 credits

This is an upper division level course designed as an introduction to robotics programming and includes robotic applications for multifunction part manipulation and motion with stepper and servomotors. Students will learn topics related to robotic design including robotic vision, motion planning, sensing and sensors, actuators, navigation systems, mobility, forward and inverse kinematics, and path planning. Prerequisite: CET 2123C. Special Fee. (2 hr. lecture, 4 hr. lab)

ETP1200
Power Plant Science
3.00 credits

This course is designed to familiarize students who are preparing for careers in Electrical Power Technology with the

fundamentals of power plant sciences. Students will learn about basic electrical science, properties of reactor plant materials, basic atomic and nuclear physics, heat transfer and fluid flow, reactor safety design, and plant chemistry. Prerequisites: MAC 1105, PHY 1025. (3 hr. lecture)

ETP1220
Power Plant Fundamentals
2.00 credits

This course is designed to familiarize students preparing for careers in Electrical Power Technology with the fundamental knowledge of power plants and their operations. Students will learn how power plants operate, as well as general administrative procedures for completing routine tasks. (1 hr. lecture; 2 hr. lab).

ETP1230
Power Plant Systems
2.00 credits

This course provides an introduction to the major systems and components that make up a modern power plant. (2 hr. lecture)

ETP2040C
Electric Power Distribution
4.00 credits

This is a required course for all students pursuing a certificate in solar photovoltaic energy generation. The student will acquire an understanding of multi-phase power transmission, how to connect to the electric grid and the major components used in electric power distribution including: power transformers, circuit breakers, transmission lines, reclosures, relay coordination, fuses, motors and generators. The student will learn about the maintenance, troubleshooting and protection of these devices against lightning and other abnormal conditions through hands-on laboratory experiments utilizing modern testing and simulation equipment. Laboratory fee. Prerequisite: EET1033C (2 hr. lecture; 4 hr. lab)

ETP2232C
Power Plant Machines and Components 2
4.00 credits

This course continues the study of industrial machines begun in ET12416C for students who are preparing for careers in industrial and/or power plant mechanical maintenance. Students learn the principles, concepts, and applications of various mechanical systems encountered in industrial applications, how to identify basic systems and components encountered in power plants, how to troubleshoot equipment problems, and basic procedures involved in maintaining and replacing component parts. Prerequisite: ETP 2231C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

ETP2410C
Design, Installation and Operation of Solar PV Systems
4.00 credits

This is a required course for all students pursuing a certificate in solar photovoltaic energy generation. The student will learn about solar photovoltaic (PV) systems and the different components comprising the system including: PV panels, controllers and the batteries used with PV systems. The student will learn to size, install, maintain, troubleshoot and repair the PV system through hands-on laboratory experiments utilizing modern testing and simulation equipment. Laboratory fee. Prerequisite: EET1033C (2 hr. lecture; 4 hr. lab)

ETP2501C
Introduction to Alternative and Renewable Energy
3.00 credits

This course is an introductory course designed to prepare students to enter the field of renewable energy and green technology and to the concepts of renewable energy. The student will examine Solar photo-voltaics, solar power and tracking systems, charge controllers and inverters, Wind power systems, Biomass and geothermal power generation. Laboratory fee. Prerequisite: EET1033C (2 hr. lecture, 2 hr. lab)

ETP3240
Power Systems
3.00 credits

This is an upper division level course for students majoring in electronics engineering technology covering specific issues of electrical power systems. Students learn power factor, three phase circuits, and transformers. Prerequisite: EET 1025C. (3hr. lecture)

ETP3320
Introduction to Renewable Energy Technology
3.00 credits

In this course, students will learn renewable energy theory and applications. This course focuses on solar photo-voltaics, solar power and tracking systems, charge controllers and inverters, wind power systems, biomass and geothermal power generation. In addition, this course covers the integration with electrical grid, production and end user systems. Prerequisite: EET 2101C. (3 hr. lecture)

ETS2520C
Process Measurement Fundamentals
3.00 credits

This course is designed for students who will be supporting industrial equipment processes. Students will learn how to perform the typical measurements made in industrial measurement and control loops. Topics include the basic physics involved in the measurements, as well as the common types of sensors used in industry with emphasis on pressure, temperature, flow, level, and analytical measurement theory. Prerequisites: EET1025C, PHY 1025. Laboratory fee. (2 hr. lecture; 2 hr. lab)

ETS2530C
Process Control Technology
3.00 credits

This course is designed for students studying systems and associated electronic circuit's encountered in the field of electric machinery and industrial controls. Students learn to analyze systems and devices and perform calculations to determine parameters to accurately predict operation. Students examine the concepts and principles of open and closed loop systems,

transducers, transformers, Transmission and distribution systems. Prerequisite: EET1025C. Special fee. (2 hr. lecture; 2 hr. lab)

ETS2542C
Programmable Logic Controllers 1
3.00 credits

This first course in programmable logic controller (PLC), is designed for students preparing for careers in electronics, manufacturing, electrical or industrial technology. Students will learn the basic operational concepts common to PLCs, focusing on PLC principles, programming, numbering systems, data manipulation, and math and sequencer instructions. Prerequisite: CET 1110C; Pre/Co-requisite: EET 1141C. Special Fee. (2 hr. lecture, 2 hr. lab)

ETS2544C
Programmable Logic Controllers 2
3.00 credits

This course is a continuation of EST 2542C for students who are familiar with basic PLC operations and concepts. Students learn the skills required to troubleshoot and maintain logic controllers in a simulated industrial environment. Topics covered include program control instructions, data manipulation instruction, math instructions, acquisition, computer controlled machines and processes. Prerequisite: ETS 2542C. Special fee. (2 hr. lecture; 2 hr. lab)

ETS 2632C
Computer Integrated Manufacturing
3.00 credits

An introduction into the fundamentals of Computer Integrated Manufacturing as it relates to theory, operation, setup, safety, and practices. Students will learn the application of Computer Aided Drawing (CAD) and Computer Aided Manufacturing (CAM) software to develop prototypes. Pre/co-requisite: MAC1105. (2 hr. lecture; 2 hr. lab)

ETS 2673C
Programmable Logic Controls
4.00 credits

This course is intended for students majoring in Electronics Engineering Technology and Advanced Manufacturing. Students will learn the principals of PLC's including hardware, programming, and trouble-

shooting. Students will develop advanced working programs, and troubleshoot hardware and software communication problems. Prerequisite: CET1110C. Laboratory fee. (2 Hr. Lecture; 4 hr. lab)

ETS3543C
Programmable Logic Controllers
4.00 credits

This upper division course is intended for students majoring in Electronics Engineering Technology. Students will learn the principals of PLC's including hardware, programming, and troubleshooting. Students will develop advanced working programs, and troubleshoot hardware and software communication problems. Prerequisite: CET 1110C. Special Fee. (2 hr. lecture, 4 hr. lab)

Engineering Technology Mechanical

ETM1700
Air Conditioning Fundamentals
3.00 credits

The basic science of air conditioning technology, the fundamentals of air conditioning for environmental control, the function and operation of the equipment and the air conditioning design process. (3 hr. lecture)

ETM2730C
Air Distribution
3.00 credits

Intensive study and practical application of air distribution technology. Duct design, fans, low velocity, high velocity, and variable volume systems are included. Laboratory work includes duct design projects. Prerequisite: ETM 1700. Laboratory fee. (2 hr. lecture; 2 hr. lab)

ETM2740C
Air Conditioning Controls & Motors
3.00 credits

Air conditioning and refrigeration control devices and theory, operation and application are covered. Electric motor technology with practical application to air conditioning is also included. Prerequisite:

ETM 1720C. Laboratory fee. (2 hr. lecture; 2 hr. lab)

ETM2750C
Air Conditioning Systems Design
3.00 credits

Design of residential and commercial environmental control systems utilizing unitary equipment. Prerequisite: ETM 1710C. Laboratory fee. (2 hr. lecture; 2 hr. lab)

ETM2930
Air Conditioning Seminar
3.00 credits

A seminar for advanced students and those with experience in air conditioning engineering covering new concepts, equipment and advances in the technology of air conditioning. Prerequisite: Permission of the department chairperson. (3 hr. lecture)

Engineering Technology-General

ETG2502
Statics
3.00 credits

The application of dead and live loads to rigid bodies at rest, including the force and moment of laws of equilibrium, determination of the direction and intensity of reactions, moments and stress in the design of engineering and architectural structures. Prerequisite: MAC 1105. (3 hr. lecture)

ETI1040
**Introduction to Bioscience
Manufacturing**
3.00 credits

This course introduces students to the field of bioscience manufacturing. Topics will include basic principles of the industry, large-scale process development and the future of the bioscience industry. Current Good Manufacturing Practices (cGMPs), and the nature and delivery system of products will also be discussed. (3 hr. lecture)

ETI1040L
Introduction to Bioscience
Manufacturing Lab
2.00 credits

In this laboratory course students will learn the basic principles of the industry, large-scale process development and the future of bioscience. Students also learn about current Good Manufacturing Practices (GMPs), and the nature and delivery system of products. Corequisite: ETI 1040. (4 hr. lab)

ETI1172
Introduction to Quality Assurance
3.00 credits

This course describes the role and aspects of quality systems and Regulatory affairs in research laboratories, regulated companies, and firms that comply with voluntary standards. Topics include stages in development and submission of drugs and medical devices, patents legislation, and quality systems such as auditing, standard procedures, good manufacturing and laboratory practices. (3 hr. lecture)

ETI1622
Concepts of Lean and Six Sigma
3.00 credits

This course is designed for students who are preparing for careers in the manufacturing industry. Students will learn the basic concepts, frameworks, and techniques used in six sigma, including total quality philosophies, the calculation of six sigma and other vital statistics, tools of lean six sigma, and knowledge of various methodologies. (3 hr. lecture)

ETI1644
Advanced Manufacturing Supply Chain
3.00 credits

This course is designed to provide students who are preparing to be manufacturing support technologists with the fundamental concepts of advanced manufacturing supply chain management (SCM) principles. Students will learn how to use manufacturing planning and control systems to coordinate material, labor, capacity and other resources to optimize manufacturing operations. Students also learn the key features of automated systems that can be

used to manage the supply chain process. (3 hr. lecture)

ETI2404
Advanced Manufacturing Technology
3.00 credits

This is a course for students intending to work in manufacturing environments. Students will learn the basic concepts about advanced manufacturing operations and processes, including sourcing materials, production planning and process monitoring, and control to distribution activities. Students also review the facility and regulatory requirements needed to support manufacturing operations. Activities may include facility tours and site visits. (3 hr. lecture)

ETM1315C
Applied Pneumatics and Hydraulics
3.00 credits

This course prepares students to perform mechanical maintenance on industrial equipment and devices. Students learn the theory and application of fluid mechanics, how to calibrate metering devices, and conduct elementary hydraulic tests. Pre/corequisite: MAC 1105 Laboratory fee. (2 hr. lecture; 2 hr. lab)

ETM2310
Fluid Mechanics
3.00 credits

This course is for students preparing for nuclear power plant systems operations. Students will learn the basics of fluid theory, pump theory and operations, and how to perform calculations using the International System of Measurements (SI) and United States (US) measurement systems. Prerequisite: ETP 1200, MAC 1150. (3 hr. lecture)

ETP2201
Reactor Theory for Nuclear Operations
2.00 credits

This course introduces fundamental nuclear reactor theory and operations principles for students who are preparing for careers in nuclear operations. Students will learn principles related to neutron theory, reactor operational physics, nuclear control rods, and factors impacting reactor opera-

tions. Prerequisites: ETP1230, PHY1025, and approval by the program chair. (1 hr. lecture; 2 hr. lab)

ETP2202
Fundamentals of Reactor Energy Principles
3.00 credits

This course is for students preparing for nuclear power plant systems operations. Students will learn concepts related to energy principles and their applications in the power plant environment, including basic energy concepts, thermodynamics and thermal processes in the nuclear power plant, heat transfer, heat exchangers, and steam. Prerequisite: ETP1200, PHY1025. (3 hr. lecture)

ETP2231C
Power Plant Machines & Components 1
4.00 credits

This course is designed for students who are preparing for careers in industrial and/or power plant mechanical maintenance. Students learn the principles, concepts, and applications of various mechanical systems encountered in industrial applications, how to identify basic systems and components encountered in power plants, how to troubleshoot equipment problems, and basic procedures involved in maintaining and replacing component parts. Prerequisite: ETP 1230 Special fee. (2 hr. lecture; 4 hr.)

ETP2233
Power Plant Components for Operations 1
3.00 credits

This course is designed for students who are preparing for careers in industrial and/or power plant operations. Students will learn to identify basic systems and components encountered in power plants and the principles, concepts and applications associated with various power plant mechanical components. Prerequisite: ETP 1230. Laboratory fee. (3 hr. lecture)

ETP2234
Power Plant Components for
Operations 2
3.00 credits

A continuation of ETP2233 Power Plant Components for Operations 1, this course is designed for students who are preparing for careers in industrial and/or power plant operations. Students will learn to develop a deeper knowledge of electro-mechanical systems in the power plant. This course will assist in preparing students for the General Fundamentals Examination (GFES). Prerequisite: ETP2233. Laboratory fee. (2 hr. lecture; 2 hr. lab)

English Language & Literature

AML2010
American Literature 1
3.00 credits

American Literature from Colonial times to the Civil War. Prerequisites: ENC 1101, 1102. (3 hr. lecture)

AML2020
American Literature 2
3.00 credits

American literature from the Civil War to the present. Prerequisites: ENC 1101, 1102. (3 hr. lecture)

CRW2001
Creative Writing 1
3.00 credits

Imaginative writing in selected genres. (3 hr. lecture)

CRW2002
Creative Writing 2
3.00 credits

Imaginative writing in selected genres. (3 hr. lecture)

ENC1101
English Composition 1
3.00 credits

This is a required general education core course in college-level writing. The students will learn to compose essays and other works using various methods of development. This course fulfills the

Gordon Rule writing requirement and must be completed with a grade C or better. Pre-requisite: Student must meet the Developmental Education reading and writing requirements in State Rule 6A-10.0315 (by course, placement score, or eligible exemption).

ENC1102
English Composition 2
3.00 credits

This is the second required general education core course in college-level writing. Students will learn the conventions of standard edited American English. Students will compose informative and persuasive essays, write responses to a variety of literary genres, and/or non-fiction, and produce a documented paper based on research. This course fulfills the Gordon Rule requirement. Prerequisite: ENC1101. Special fee. (3 hr. lecture)

ENC1112
Essential Elements of English
Grammar
1.00 - 3.00 credits

This course is designed for students whose writing and/or CLAST English language skills test scores demonstrate a need for continued instructional support. It covers many of the same topics assessed by the CLAST objective English language skills component. Course content is individualized based on specific student needs. This course is repeatable. Prerequisites: Placement by Scholastic Assessment Test (SAT) verbal subtest score; American College Testing (ACT) English subtest score; Computerized Placement test (CPT) English subtest score or ENC0021 with a grade of "S". (1-3 hr. lecture)

ENC1113
Writing Skills Review
1.00 - 3.00 credits

This course is designed for students whose writing and/or English language skills test scores demonstrate a need for continued instructional support and features self-assessment grammar diagnostics. Students will learn the principles of composition via the writing process: planning, drafting, revising, finishing and editing. Note:

This one-to-three-credit course is repeatable. Prerequisites: Placement by Scholastic Assessment Test (SAT) verbal score; American College Testing (ACT) English subtest score; Computerized Placement test (CPT) English subtest score; or ENC0021 with a grade of "S".

ENC2300
Advanced Composition and
Communication
3.00 credits

This writing-based course addresses techniques of critical thinking, persuasion, and argumentation. Students will refine their composition skills and develop their oral communication skills by examining and discussing a range of issues. Prerequisites: ENC1101, 1102 or equivalent with a grade of "C" or better. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

ENG1949
Co-op Work Experience 1: ENG
3.00 credits

This course is designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3hr. lecture)

ENL2012
English Literature 1
3.00 credits

A survey of major British writers from Chaucer through the 18th century. Required of English majors. Prerequisites: ENC 1101, 1102 or equivalent. (3 hr. lecture)

ENL2022
English Literature 2
3.00 credits

A survey of major British writers from the 18th century through the contemporary period. Required of English majors. Prerequisites: ENC 1101, 1102. (3 hr. lecture)

LIT2000
Introduction to Literature
3.00 credits

Students will learn about various works of literature from different genres (including but not limited to: short story, play, poetry, novel, and essay). This course fulfills the Gordon Rule writing requirement and must be completed with a C or better. Prerequisite: ENC 1101. (3 hr. lecture.)

LIT2090
Contemporary Literature
3.00 credits

A survey of contemporary prose and poetry. Prerequisites: ENC 1101, 1102 or equivalent. (3 hr. lecture)

LIT2110
A Survey of World Literature 1
3.00 credits

The masterpieces of world literature. Prerequisites: ENC 1101, 1102 or equivalent. (3 hr. lecture)

LIT2120
A Survey of World Literature 2
3.00 credits

LIT 2120 explores masterpieces of world literature from the mid-renaissance to the present. Works studied exemplify the universality of human experience. Fulfills Gordon Rule writing requirement. Prerequisites: ENC 1101, 1102 or equivalent. (3 hr. lecture)

LIT2131
Mythology in Literature: The Arthurian Tradition
3.00 credits

The course will trace the progress of the legends surrounding King Arthur from medieval to contemporary poetry and prose, with primary focus on literary texts and supplementary investigation of Arthurian themes in art, film, and music. (3 hr. lecture)

LIT2174
Literature of the Holocaust and Genocide
3.00 credits

This course explores the literary responses to the Holocaust and Genocide using a

variety of texts including written, film, and propaganda/graphic arts. Students will learn the various literary techniques used to interpret these key world and historical events. Prerequisite: ENC 1101. (3 hr. lecture)

LIT2330
Survey of Children's Literature
3.00 credits

This course will familiarize interested students with major works in children's literature and with the principal genres and subgenres including, but not limited to, picture books (Mother Goose, easy-to-read books, picture storybooks); traditional fantasy (folktales, myths); modern fantasy (curious characters, science fiction); realistic fiction; poetry; and nonfiction. It will also analyze the role that literature has played and/or should play in the teaching of reading in primary school. (3 hr. lecture)

LIT2480
Issues in Literature & Culture
3.00 credits

Students will learn about literature as a socio-cultural response by writers to the world in which they live; they will connect literary texts to cultural issues through completion of oral and written assignments, critical analysis and practical investigation. Fulfills Gordon Rule writing requirement. Prerequisite: ENC 1102. (3 hr. lecture)

English Language and Literature - College Preparatory

ENC0015
Developmental Writing I
4.00 credits

Developmental Writing I is a college preparatory writing course. Students will learn to address effective sentence and paragraph development. Lab time required. Laboratory fee. Prerequisite: Placement by Scholastic Assessment Test (SAT) verbal subtest score; American College Test (ACT) English subtest score; Computer Placement Test (CPT) or Post-secondary Education Readiness Test (PERT). Student must have completed the college's entrance exam

and placed in the appropriate course level in order to register. (2 hr. lecture; 4 hr. lab)

ENC0025
Developmental Writing II
4.00 credits

Developmental Writing II is an intermediate college preparatory writing course. Students will learn to address effective sentence, paragraph, and essay development using standard edited American English. Lab time required. Laboratory fee. Prerequisite: Computer Placement (CPT) score; Scholastic Assessment Test (SAT); American College Test (ACT); or Post-secondary Education Readiness Test (PERT). Student must have completed the college's entrance exam and placed in the appropriate course level in order to register. (2 hr. lecture; 4 hr. lab)

ENC0027
Introduction to College Writing through Reading
3.00 credits

This course introduces students to college level composition and reading. Students will use the writing process to compose effective sentences, paragraphs, and essays using standard edited American English in response to various reading materials. Students will demonstrate proficiency in literal and critical comprehension by using a variety of reading strategies. (3 hr. lecture)

ENC0056
Developmental Writing Module
2.00 credits

This course is designed to develop written language skills for students whose entry placement scores do not meet requirements for degree credit courses (course not applicable for graduation requirements). This course may be taken in place of ENC 0025 for students who completed ENC 0025 in a prior term but did not earn a passing grade. Students will learn to focus on their individual grammar, usage, and writing needs to prepare for successful entry into college credit English courses. Prerequisite: Students must score 97-98 on the PERT or receive departmental permission. (2 hr. lecture)

Entrepreneurship

ENT1501

Fundamentals of Changemaking and Social Innovation

3.00 credits

This course introduces students to the work of changemaking and the field of social innovation. Students will explore principles of social innovation and social change, while developing the skills to analyze social issues, generate solutions to those issues, and become an effective social change agent. (3 hr. lecture)

ENT2201

Introduction to Lean Start-Up

3.00 credits

The student will learn how successful start-ups find a repeatable, scalable business model that creates value for themselves and customers. In this experientially driven course, student teams develop, validate and refine a business model by creating hypothesis, designing products/services, testing the hypotheses, and reflecting on what has been learned. Prerequisite: GEB2112 (3 Hr. Lecture)

ENT2212

Entrepreneurial Leadership

3.00 credits

The student will learn key skills and traits of successful entrepreneurs. Students will explore the notion of values-based business formation, personal strength and weakness identification, leadership for team building, project and personal time management, and story-telling. (3 hr. lecture)

ENT2270

Family Business Management

3.00 credit

This course covers special issues facing entrepreneurial and family businesses such as choice of organizational form, business planning, tax and compensation planning, business valuation, and succession strategies. Time is also devoted to the unique challenges often found in family business context, such as dealing with family conflicts, how to motivate and evaluate

employees when a mix of family and non-members are involved, and planning for succession. (3 hr. lecture)

ENT2421

Funding Your Venture

3.00 credit

This course focuses on critical skills necessary to develop appropriate funding strategies for new venture creation and growth. Students will explore a variety of ways to raise capital and gain an understanding of investors' expectations and how to evaluate the advantages and pitfalls of various sources of capital. (3 hr. lecture)

ENT2502

Starting and Growing a Social Venture

3.00 credits

The course explores the start-up, growth, and management of social entrepreneurship. Social ventures share attributes but also differ from for-profits in intent and practice. The student will learn the elements of integration, innovation; development and management of a business within and existing corporate culture. Ideation, venture creation, resource acquisition, and growth management are also addressed. (3 hr. lecture)

ENT2511

Evaluating Social Impact

3.00 credit

This course introduces students to measure and evaluate the effectiveness of strategies implemented to resolve social issues. Students will utilize different techniques to determine the success of the social change strategies selected and how the results obtained made organizations or groups more efficient in resolving the social issues. (3 hr. lecture)

ENT2612

Creativity, Innovation and Human Centered Design

3.00 credits

This course will lead students through major phases of the creative problem solving process and methods of human centered - design thinking. Students will learn the basic skills for creative problem solving,

innovation, and user-centered design. Students will identify and evaluate problems and opportunities; they will sketch, create, develop, test, and select the best prototyping options for a new product or service. (3 hr. lecture)

Environmental Studies

EVR1001

Introduction to Environmental Sciences

3.00 credits

Students will learn a conceptual approach to understanding the interrelationships of humans and natural processes at work in the environment. Application to local issues as well as broader global problems and prospects will be made, with emphasis on sustainable development. Special fee. (3 hr. lecture)

EVR1001L

Introduction to Environmental Science Laboratory

1.00 credits

This course is the laboratory component for EVR1001 - Introduction to Environmental Science. Students will learn how the human and physical/biological worlds affect global climate change, including human/non-human interactions with minerals and mining, landscape ecology, petroleum depletion, and alternative fuels with the understanding of the earth's environment. Pre/Corequisite: EVR1001 (2 hr. Lab)

ESL For Academic Purposes

EAP0100

Speech/Listening 1

3.00 credits

Students develop the ability to understand frequently used words in oral contexts and understand and respond appropriately to simple phrases and questions. Corequisite: EAP 0100L. (3 hr. lecture)

EAP0100L
Speech/Listening 1 Laboratory
1.00 credits

This lab will give practice in oral production and aural comprehension of spoken American English. This practice will be related, but not limited to the material taught in EAP 0100. (2 hr. lab)

EAP0120
Reading Level 1
3.00 credits

Students develop the ability to comprehend limited written materials. (3 hr. lecture)

EAP0140
Writing Level 1
3.00 credits

Students develop the ability to write appropriate phrases and short sentences on personal topics. Corequisite: EAP 0140L. (3 hr. lecture)

EAP0140L
Writing Level 1 Laboratory
1.00 - 3.00 credits

This lab will provide support and additional practices as well as focus on multi-skills as students develop their abilities in meeting the competencies of EAP 0140. (2-6 hr. lab)

EAP0160
Grammar Level 1
3.00 credits

Students develop the ability to understand and use basic, high frequency grammatical structures. (3hr. lecture)

EAP0200
Speech/Listening 2
3.00 credits

Students continue to develop the ability to understand frequently used words in oral contexts and understand and appropriately respond to simple phrases and questions. Prerequisite: EAP 0100; Corequisite: EAP 0200L. (3 hr. lecture)

EAP0200L
Speech/Listening 2 Laboratory
1.00 credits

Continue to give practice in oral production and aural comprehension of spoken

American English. This practice will be related to, but not limited to the material taught in EAP0200. Prerequisite EAP 0100L. (2 hr. lab)

EAP0220
Reading Level 2
3.00 credits

Students develop the ability to comprehend limited written materials. (3 hr. lecture)

EAP0240
Writing Level 2
3.00 credits

Students continue to develop writing skills in the context of guided discourse on personal topics with an emphasis on logical thought and mechanics. Prerequisite: EAP 0140; Corequisite: EAP 0240L. (3hr. lecture)

EAP0240L
Writing Level 2 Laboratory
1.00 - 3.00 credits

This lab will provide additional practices as well as focus on multi-skills as students develop their abilities in meeting the competencies of EAP 0140. Prerequisite: EAP 0140L; Corequisite: EAP 0240. (2-6 hr. lab)

EAP0260
Grammar Level 2
3.00 credits

Students continue to develop control of basic grammatical structures and statement/question patterns. Prerequisite EAP 0160. (3 hr. lecture)

EAP0300
Speech/Listening 3
3.00 credits

Students develop speaking and listening skills necessary for participating in classroom discussions with an emphasis on clarification through rewording and asking questions. Prerequisite: EAP 0200; Corequisite: EAP 0300L. (3 hr. lecture)

EAP0300L
Speech/Listening 3 Laboratory
1.00 credits

Students practice speaking and listening skills necessary for participating in classroom discussions with an emphasis

on clarification through rewording and asking questions. Prerequisite; EAP 0200L; Corequisite: EAP 0300 (2 hr. lab)

EAP0320
Reading Level 3
3.00 credits

Students develop the ability to read text on familiar and basic academic topics with an emphasis on vocabulary expansion and application of critical reading skills. Prerequisite: EAP 0220. (3 hr. lecture)

EAP0340
Writing Level 3
3.00 credits

Students develop the ability to write basic, structured academic paragraphs on familiar topics and execute other academic writing tasks. Prerequisite: EAP 0240; Corequisite: EAP 0340L. (3 hr. lecture)

EAP0340L
Writing Level 3 Laboratory
1.00 - 3.00 credits

Students develop the ability to write basic, structured academic paragraphs on familiar topics and execute other academic writing tasks. Prerequisite: EAP 0240L; Corequisite: EAP 0340. (2-6 hr. lab)

EAP0360
Grammar Level 3
3.00 credits

Students develop the ability to use intermediate-level grammatical structure appropriate to classroom discussion and the writing of academic paragraphs with an emphasis on increased accuracy. Prerequisite: EAP 0260. (3 hr. lecture)

EAP0385
Intermediate 1 - Integrated Writing & Grammar
6.00 credits

Students will learn how to write paragraphs using intermediate grammar and rhetorical structures. (6 hr. lecture)

EAP0386**Intermediate 1 - Integrated Reading,
Speech & Listening
6.00 credits**

Students will learn to develop proficiency in reading level-appropriate text by listening to short oral discourse and discussing academic materials. Emphasis is on vocabulary expansion and application of strategies that assist in comprehension and communication. Prerequisites: EAP 0200, 0220, or equivalent proficiency. (6 hr. lecture)

EAP0400**Speech/Listening 4
3.00 credits**

Students continue to develop speaking and listening skills necessary for participating in classroom discussions with an introduction to oral presentation and critical listening skills. (3 hr. lecture)

EAP0400L**Speech/Listening 4 Laboratory
1.00 credits**

Students continue to practice speaking and listening skills necessary for participating in classroom discussions with an introduction to oral presentation and critical listening skills. Prerequisite: EAP 0300L; Corequisite EAP 0400. (2 hr. lab)

EAP0420**Reading Level 4
3.00 credits**

Students develop academic reading abilities including text on contemporary and literary topics with an emphasis on extensive reading and the enhancement of critical reading skills. Prerequisite: EAP 0320. (3 hr. lecture)

EAP0440**Writing Level 4
3.00 credits**

Students develop the ability to write more sophisticated, structured academic paragraphs in various rhetorical modes and execute other academic writing tasks. (3 hr. lecture)

EAP0440L**Writing Level 4 Laboratory
1.00 - 3.00 credits**

Students continue to practice developing to write more sophisticated, structured academic paragraphs in various rhetorical modes and execute other academic writing tasks. Prerequisite: EAP 0340L; Corequisite: EAP 0440. (2-6 hr. lab)

EAP0460**Grammar Level 4
3.00 credits**

Students develop the ability to use intermediate-level grammatical structure appropriate to classroom discussion and the writing of more sophisticated academic paragraphs with an emphasis on increased accuracy. Prerequisite: EAP 0360. (3 hr. lecture)

EAP0485**Intermediate 2 - Integrated Writing
& Grammar
6.00 credits**

Students will learn to refine paragraphs using intermediate grammar and rhetorical structures. Prerequisites: EAP 0340, 0360, 0385, or equivalent proficiency. Co-requisite: one (1) approved college-level course recommended. (6 hr. lecture)

EAP0486**Intermediate 2 - Integrated Reading,
Speech & Listening
6.00 credits**

Students will learn to develop speaking, listening, and academic reading skills through discussions, presentations, and analysis with an emphasis on oral fluency, critical reading, and vocabulary expansion. Prerequisites: EAP 0300 or 0386, and 0320, or equivalent proficiency. Co-requisite: one (1) approved college level course. (6 hr. lecture)

EAP0493**Accelerated Intermediate Speech and
Grammar
6.00 credits**

In this accelerated alternative course for EAP 0300, 0360, 0400, and 0460, students will learn intermediate-level grammar and vocabulary, and will enhance their oral

communication proficiencies via brief lectures, oral presentations, and classroom discussions, improving spoken fluency, accuracy, and interpersonal skills in English. Prerequisites: EAP 0220 and 0240 or appropriate COMPASS score; Corequisite: EAP 0494. (6 hr. lecture)

EAP0494**Accelerated Intermediate Reading
and Writing
6.00 credits**

In this accelerated alternative course for EAP courses 0320, 0340, 0420, and 0440, students will learn English while reading intermediate-level academic texts, expand their vocabulary, and enhance their writing proficiency with structured academic tasks. Prerequisite: EAP 0220 and 0240 or appropriate COMPASS score; corequisite: EAP 0493. (6 hr. lecture)

EAP1500**Speech/Listening Level 5
3.00 credits**

Students develop communication, organization, and pronunciation skills necessary for effective academic presentation and discussion with an introduction to lecture note taking. (3 hr. lecture)

EAP1500L**Speech/Listening Level 5 Laboratory
1.00 credits**

Students develop communication, organization, and pronunciation skills necessary for effective academic presentation and discussion with an introduction to lecture note taking. (2 hr. lab)

EAP1501**Accent Reduction 1
3.00 credits**

Students develop the ability to write basic structured academic essays with an emphasis on accuracy and cohesiveness and execute other academic writing tasks. (1-3 hr. lecture)

EAP1501L**Accent Reduction 1 Laboratory
1.00 credits**

Students improve their pronunciation of American English including stress, rhythm,

and intonation. The phonetic structure of consonant sounds is systematically analyzed, and students are given practice in correctly pronouncing these sounds and patterns in context. (2 hr. lab)

EAP1502
Accent Reduction 2
3.00 credits

Students improve their pronunciation of American English including stress, rhythm, and intonation. The phonetic structure of vowel sounds is systematically analyzed, and students are given practice in correctly pronouncing these sounds and patterns in context. (3 hr. lecture)

EAP1502L
Accent Reduction 2 Laboratory
1.00 credits

Students improve their pronunciation of American English including stress, rhythm, and intonation. The phonetic structure of vowel sounds is systematically analyzed, and students are given practice in correctly pronouncing these sounds and patterns in context. (2 hr. lab)

EAP1520
Reading Level 5
3.00 credits

Students develop the ability to comprehend lengthier texts on diverse academic topics by applying appropriate reading strategies. (3 hr. lecture)

EAP1540
Writing Level 5
3.00 credits

Students develop the ability to write basic structured academic essays with an emphasis on accuracy and cohesiveness and execute other academic writing tasks. (3 hr. lecture)

EAP1540L
Writing Level 5 Laboratory
1.00 - 3.00 credits

Students develop the ability to write basic structured academic essays with an emphasis on accuracy and cohesiveness and execute other academic writing tasks. (2-6 hr. lab)

EAP1560
Grammar Level 5
3.00 credits

Students develop the ability to comprehend and interpret authentic college-level text in content areas by applying appropriate reading strategies. (3 hr. lecture)

EAP1581
Advanced 1 Combined Skills: Content-based English
6.00 credits

This course is intended for Advanced I EAP students and prepares the non-native speaker of English for college level study. Students will learn by focusing on speaking, listening, grammar/vocabulary, writing, and reading comprehension skills as they relate to selected Education courses. Prerequisites: EAP 0400, 0420, 0440, and 0460. Corequisite: EEC 1000, or EEC 1200, or EEC 1311, or EEC 2202. Recommended preparation: Appropriate passing score on the COMPASS Test. (6 hr. lecture)

EAP1585
Advanced 1 - Integrated Writing & Grammar
6.00 credits

Students will learn to write essays by developing advanced grammar and rhetorical structures. Prerequisites: EAP0440 or 0485, and 0460, or equivalent proficiency. Co-requisites: one (1) approved college level course (6 hr. lecture)

EAP1586
Advanced 1 - Integrated Reading, Speech & Listening
6.00 credits

Students will learn to comprehend academic and other authentic reading materials and effectively participate in college-level oral/aural tasks by applying appropriate learning strategies. Prerequisites: EAP 0420 or 0486, and 0400, or equivalent proficiency. Co-requisite: one (1) approved college level course. (6 hr. lecture)

EAP1600
Speech/Listening Level 6
3.00 credits

Students further develop communication skills necessary for full participation in mainstream college classrooms including comprehension of extensive discourse. (3 hr. lecture)

EAP1600L
Speech/Listening Level 6 Laboratory
1.00 credits

Students further develop communication skills necessary for full participation in mainstream college classrooms including comprehension of extensive discourse. (2 hr. lab)

EAP1620
Reading Level 6
3.00 credits

Students develop the ability to comprehend and interpret authentic college-level text in content areas by applying appropriate reading strategies. (3 hr. lecture)

EAP1640
Writing Level 6
3.00 credits

Students develop the ability to write a variety of college-level essays with sophistication, fluency, and accuracy and execute other academic writing tasks. (3 hr. lecture)

EAP1640L
Writing Level 6 Laboratory
1.00 - 3.00 credits

Students further develop the ability to write a variety of college-level essays with sophistication, fluency and accuracy, and execute other academic writing tasks. (2-6 hr. lab)

EAP1660
Grammar Level 6
3.00 credits

Students develop the ability to use complex grammatical structure necessary for effective participation in mainstream college classes. (3 hr. lecture)

EAP1683
Combined Accelerated Advanced Reading/Writing level 6
6.00 credits

This is an accelerated alternative course for EAP courses 1520, 1540, 1620, and 1640. Students will learn to complete college-level reading and writing assignments. Prerequisite: EAP 0420, 0440 or appropriate placement score on COMPASS exam (87-92 on reading subtest) and writing sample; Corequisite EAP 1689 Combined Accelerated Advanced Speech, Listening, and Grammar. (6 hr. lecture)

EAP1685
Advanced 2 - Integrated Writing & Grammar
6.00 credits

Students will learn to refine essays by developing advanced grammar & rhetorical structures. Prerequisites: EAP1540 and 1560, or 1585, or equivalent proficiency. Co-requisites: one (1) approved college level course (6 hr. lecture)

EAP1686
Advanced 2 - Integrated Reading, Speech & Listening
6.00 credits

Students will learn to comprehend academic and other authentic reading materials and effectively participate in college-level oral/aural tasks by applying appropriate learning strategies. Prerequisites: EAP1586 or 1520, and 1500. Co-requisite: one (1) approved college level course. (6 hr. lecture)

EAP1689
Combined Accelerated Advanced Speech, Listening and Grammar Level 6
6.00 credits

This is an accelerated alternative course for EAP courses 1500, 1560, 1600, and 1660. Students will learn oral communication and lexico-grammatical skills necessary for college-level courses. EAP 0420 and 0440 or appropriate placement score on COMPASS exam (81-88 on grammar subtest and 83-91 on listening subtest) and writing sample; Corequisite: EAP 1683

Combined Accelerated Advanced Reading and Writing. (6 hr. lecture)

Fashion

CTE1050
Introduction to Fashion Design and Related Industries
3.00 credits

In this course, the student will learn the functions and processes of the fashion industry from the designer's and the merchant's perspective. The student will also explore how products go from concept, development, production, marketing and finally, the consumer. The course explores the global interrelationships of the fashion industry segments. (3 hr. lecture)

CTE1401
Textiles
3.00 credits

This is a survey course designed for students majoring in fashion-related curriculum or with a general interest in textile materials. Students will learn basic elements of the transformation from fiber of textiles into finished goods. The course provides insights into textile manufactures with a primary focus on general textile applications relative to end-use consumer products. Students will learn the terminology needed for effective communication throughout the fashion supply chain, gain insight and appreciation for the relative value of textile products and the appropriateness of specific textile uses. (3 hr. lecture)

CTE1401L
Introductory Textile Science Lab
1.00 credit

The laboratory CTE 1401L course complements the Introductory Science CTE 1401 course. Students will learn the methods for basic identification of textile materials and rudimentary analysis techniques. The laboratory is also designed to support and parallel the concepts discussed in the lectures. (2 hr. lab)

CTE1721C
Fashion Design I
3.00 credits

This course explores foundations of the design process, the elements and principles of design. Elements of design described here are point, line, shape, form, space, color, and texture. Principles of design include balance, proportion, perspective, emphasis, movement, pattern, repetition, rhythm, variety, harmony, and unity. The student will develop, present and execute design ideas exploring both elements and principles of design. Students also develop sketchbooks detailing the development of each project. Prerequisite: CTE 1743C (1 hr. lecture, 2 hr. lab)

CTE1743C
Patternmaking Level 1
3.00 credits

This course will focus on the development of basic blocks: bodice, skirt, sleeve and pant. The 3 basic tenets of design development, dart manipulation, adding volume and contouring are reviewed, in accordance with standard production practices. The student will learn to draft and manipulate the various garments and develop toiles and final patterns. (1 hr. lecture, 3 hr. lab)

CTE1801
Introduction to Fashion Merchandising and Marketing
3.00 credits

This introductory class provides an exposure to merchandising and terminology. Students will learn the entrepreneurs who influence the industry, career possibilities and an overview of the components of a manufacturer's or retailer's promotional techniques. (3 hr. lecture)

CTE1841C
Apparel Evaluation & Production
3.00 credits

This is an introductory course in the apparel development process. Students will learn to facilitate the communication and coordination of pre-product development tasks achieved through linking design, costing, and manufacturing technology in the production setup for each design. Students will learn how outsourcing affects the

product development process in editing garment designs and the line development calendar. Prerequisite: CTE1401, CTE1401L (1 hr. lecture; 2 hr. lab)

CTE1930
Fashion Seminar
3.00 credits

In this course, the student will learn about industry characteristics, interrelationships, segments and the newest business models in fashion retailing. In addition, the student will explore marketing trends and techniques as well as technology's role in the global retail market. A combination of case study reviews, guest speakers, mock pitch competitions and class discussion are used to bring trending retail industry topics "front and center". (3 hr. lecture)

CTE1942
Fashion Industry Internship
3.00 credits

This internship course provides eligible students with placement in premier fashion settings and with the professional and practical experiences needed to further their education in a variety of fashion-based positions. Students control the internship selection process and work with an internship coordinator in the revisions of their resumes and schedule of interviews within the network of fashion companies. Fashion internships are available in the areas of design, merchandising, buying, show-room, and fashion public relations.

CTE2111C
Digital Fashion Portfolio
3.00 credits

In this course, the fashion merchandising student will create their capstone portfolio. The student will create marketing and merchandising plans, complete with visual representations for 3 or more concepts. Marketing channels to be explored include but are not limited to online, social media and brick and mortar. The student will integrate the use of Adobe Photoshop, Adobe Illustrator and Microsoft Excel. Prerequisite: CTE 2732, CTE 2802 (1 hr. lecture, 2 hr. lab)

CTE2120
Portfolio Collection Development
3.00 credits

In this course, the student will use both hand and digital techniques to develop a physical and online portfolio. The student will also incorporate target market and research built on previous course projects to produce a professional presentation ready for the industry. Prerequisite: CTE 1841C, CTE 2732; Corequisite: CTE 1760C (3 hr. lecture)

CTE2301
Product Development
3.00 credits

In this course students will learn the concepts and methods by which retailers create special, store-branded merchandise for targeted customer segments. The process of product development, from research to production to distribution, is studied. Prerequisite: CTE1401L, CTE1401. (3 hr. lecture)

CTE2310C
Clothing Construction Methods
Level 1
3.00 credits

Students will learn the basic elements of sewing utilized and incorporated into all designs in the garment industry. These garment structures form the fundamentals of sewing and are integrated into the construction methods used by each company in the applications to a specific design. Prerequisite: CTE1721C. (1 hr. lecture; 2 hr. lab)

CTE2330C
Clothing Construction Methods
Level 2
3.00 credits

This course focuses on intermediate to advanced finishing techniques. The student will learn various fabric manipulation techniques along with advanced collar, hem and pocket finishes in original student design and pattern work. Prerequisite: CTE 1743, CTE 2310C (1 hr. lecture, 3 hr. lab)

CTE2388
Principles of Contemporary Retailing
3.00 credits

In this course students will learn the operational segments of the fashion industry and their functions. The course focus is on the contributions employees add to sales productivity and customer satisfaction in retail establishments and on the exploration of new technologies and their impact on consumers' shopping experiences. Prerequisite: CTE1050. (3 hr. lecture)

CTE 2342C
Clothing Construction Methods
Level 3
3.00 credits

This course advances students' knowledge about materials, core properties and construction techniques that inform their choices made for silhouette creation and hands-on prototype development. Students will explore more advanced principles and techniques of unstructured draping using soft fabric for the creative interpretation and artistic development of contemporary designs. Emphasis on proportion, balance and shape as related to design aesthetics. Pre-Req CTE2330C. (1 hr. lecture; 4 hr. lab)

CTE2610
Fashion Forecasting & Research
3.00 credits

In this course students will learn to explore and apply forecast research methods in preparation for developing, planning, purchasing, or merchandising apparel lines and collections. Using the case study method, trend research is evaluated through the use of scholarly texts, articles, databases, and relevant websites to identify opportunities for growth and profitability in a fashion business. Prerequisite: CTE1050, MAR1011 (3 hr. lecture)

CTE2722C
Fashion Design 2
3.00 credits

The course focuses on group design work and industry partnerships that allows the student to experience real world design briefs. The student will also explore design in a corporate setting either virtually or

literally under the ethos of a given corporate DNA. Projects are then reviewed and feedback is given by the community (corporate) partners. In addition, the student will experiment with new technologies including but not limited to laser cutting, 3D printing, and wearable technology. Students develop sketchbooks detailing the development process of each project. Prerequisite: CTE 1721C , CTE 2745C (1 hr. lecture, 2 hr. lab)

CTE2732

Fashion Illustration Technology

3.00 credits

This course introduces Computed Aided Design as it applies to Fashion Design and Fashion Merchandising. Using various computer software, including but not limited to Adobe Photoshop and Adobe Illustrator, students will learn the techniques to conceptualize and communicate design ideas and collections to create industry-standard presentations. (3 hr. lecture)

CTE2745C

Patternmaking Level 2

3.00 credits

This course focuses the integration of flat pattern and draping. The student will learn the foundations of Draping as a design development and execution technique. How to move from the form to the flat and on to the body. Prerequisite: CTE 1743C, CTE 2310C (1 hr. lecture, 3 hr. lab)

CTE2749C

Patternmaking Level 3

3.00 credits

This course reinforces the students understanding of the art of draping and patternmaking and diverse methods the industry uses to create production patterns. Students will analyze draping and drafting techniques to create an awareness of which method is most applicable for a given situation. Analytical thinking and hands-on class experiences will strengthen students' skills, thus enabling them to expand on their creativity and provide proper fit to their creations. (1 hr. lecture; 4 hr. lab)

CTE2760C

Creative Design

3.00 credits

In this capstone course, the student will focus on the acquisition of a multidisciplinary methodology needed to produce a collection. The student will also survey the various steps of building a collection, from conception and range planning through to design, execution and presentation. A minimum of 6 looks will be produced by the end of the semester. Prerequisite: CTE2342C and CTE2722C and CTE2749C. (1 hr. lecture, 2 hr. lab)

CTE2800

Textile, Apparel & Retail Analysis

3.00 credits

In this course students will learn about textile marketing of sustainable apparel and the textile value chains from product concept to the consumer. A variety of topics on global value chains, market analysis, product development, manufacturing, market and sourcing are explored. The global impact of trade and sourcing constraints are examined. Through readings, case studies and in-class industry presentations, students will explore a comprehensive array of contemporary issues, both social and regulatory, that help in understanding the complex value and supply chain. Prerequisite: CTE2388 (3 hr. lecture)

CTE2802

Fashion Merchandising Strategies

3.00 credits

In this course students will gain comprehensive knowledge of the merchandising environment, including the functions and objectives of the merchandising team, the principles and techniques of today's buyers, planners, product developers, and account executives. Prerequisite: CGS1060C (3 hr. lecture)

CTE2836

Global Merchandising

3.00 credits

In this course students will learn the merchandising practices used around the world in fashion apparel companies, both in retail and wholesale. American merchandising

theory is used as a base of comparison in the consideration of various religions, cultures, legal systems, and other global systems. Corequisite: CTE2802 (3 hr. lecture)

Film, Radio, TV Technology

DIG3255C

Advanced Sound Design

3.00 credits

In this upper division course for BAS students in Film, Television & Digital Production students will learn advanced audio production, emphasizing audio recording, mixing, editing, overdubbing, and aesthetics. Prerequisite: RTV1240C; (2 hr. lecture 2 hr. lab)

DIG3347C

Advanced Cinematography

3.00 credits

In this upper division course for BAS students in Film, Television & Digital Production students will learn the technical and aesthetic principles of advanced cinematography techniques. Prerequisite: RTV2246C, FIL2515C; (2 hr. lecture 2 hr. lab)

DIG3940

Upper Division Internship

3.00 credits

In this upper division internship for BAS students in Film, Television & Digital Production students will learn to apply their knowledge and skills at an established film or television entertainment company (144 hr. Internship).

DIG4345C

Digital FX & Compositing

3.00 credits

In this upper division course for BAS students in Film, Television & Digital Production students will learn the theory and practice of video compositing and motion graphics. (2 hr. lecture 2 hr. lab)

DIG4505C
DVD Authoring, Web Design, & Electronic Distribution

3.00 credits

Students will learn how to author interactive DVDs, create a basic website and distribute audio and video content via the internet. Corequisite: FIL4586C. (2 hr. lecture; 2 hr. lab)

FIL1030
History of Film

3.00 credits

In this introductory course students will learn about the history of motion pictures, with an emphasis on American and European films. (3 hr. lecture)

FIL1055
American Independent film

3.00 credits

In this introductory course, students will learn about the American independent film movement with an emphasis on American directors and producers. (3 hr. lecture)

FIL1060
Survey of Documentary Film

3.00 credits

In this introductory course students will learn the history of nonfiction films, with an emphasis on American and European filmmakers. (3 hr. lecture)

FIL1100
Screenwriting 1: Introduction to Story Structure

3.00 credits

A workshop-style introductory class covering narrative script writing for film and television. Students will learn to develop a short-format screenplay incorporating three-act story structure, script elements, and standard industry formatting. (3 hr. lecture)

FIL1420C
Film Production 1: Introduction to the Filmmaking Process

4.00 credits

An introductory overview of the art and technology of narrative motion picture production. Students will learn basic production techniques, from pre-production

through production to final screening. Corequisite: FIL2552C; (2 hr. lecture 4 hr. lab)

FIL1431C
Film Production 2: Cinematography and Sound

4.00 credits

An introductory course in which students will learn cinematography and sync-sound motion picture production. Prerequisite: FIL1420C; Corequisite: FIL2553C; (2 hr. lecture 4 hr. lab)

FIL2131
Screenwriting 2: Character Development & Advanced Story Structure

3.00 credits

In this workshop-style intermediate level course students will learn about character development and various story structures for narrative motion picture screenplays. Prerequisite: FIL1100 (3 hr. lecture)

FIL2407
Film/Pre-Production

2.00 credits

This class prepares students for the film production process by introducing them to the technical and organizational aspects of filmmaking that need to be completed before the first day of production. Students will learn all aspects of pre-production planning and preparation including analyzing and interpreting scripts, storyboards, fax-sheets and set designs, casting, wardrobe and make-up considerations and they will learn to prepare a location and studio set-up. (1 hr. lecture; 2 hr. lab)

FIL2413
Screenwriting 3

3.00 credits

An advanced course in which the fundamentals of story structure and character development introduced in Screenwriting 1 and Screenwriting 2 are refined. The student will learn how to write an outline for a feature-length motion picture. Prerequisite: FIL2131; (3 hr. lecture)

FIL2480C
Film Production 3: Directing

4.00 credits

An intermediate practicum in motion picture direction through the analysis of various directors' and their cinematic styles. Students will learn the role of the director by interpreting dramatic material, effectively guiding acting performances, and communicating a story visually. Prerequisite: FIL1431C, RTV1240C, FIL2553C; (2 hr. lecture 4 hr. lab)

FIL2515C
Film Production 4: Producing the Short Film

4.00 credits

An advanced course in film production. Students will learn to apply the fundamentals of film production as introduced in Film Production 1, 2, & 3 to the production of a portfolio-quality narrative short film. Prerequisite: FIL2480C; (2 hr. lecture 4 hr. lab)

FIL2552C
Editing Level 1: Introduction to Editing

3.00 credits

An introductory course in which students will learn the practice of editing digital media. (2 hr. lecture 2 hr. lab)

FIL2553C
Editing Level 2: Intermediate Editing and Visual Effects

3.00 credits

An intermediate course in which students will learn video editing with an emphasis on sound design and visual effects. Prerequisite: FIL2552C; (2 hr. lecture 2 hr. lab)

FIL2560C
Editing Level 3: Advanced Editing: Color Correction and Finishing

3.00 credits

An advanced course in which students will learn the practice of color correcting and finishing fiction and non-fiction projects. Prerequisite: FIL2553C; (2 hr. lecture 2 hr. lab)

FIL2572C
Advanced Video Post Production

3.00 credits

Students will learn advanced theory and practice of non-linear editing. The course

will concentration effects, color correction and editorial working practices. Prerequisite: FIL 2552C, 2553C with a grade of "C" or better. Laboratory fee. (2 hr. lecture; 2 hr. lab)

FIL2611
Film Business Marketing Distribution Exhibition
3.00 credits

Examination of the functional areas within marketing as well as the various distribution means (both current and projected) that are governing the sale of independent feature films or films financed outside of the studio system. Students learn to distribute their own selected films in this course. Prerequisite: FIL 1431. (3 hr. lecture)

FIL2945
Film Internship
3.00 credits

Students will learn to apply the various skills gained throughout the program in a semester long immersion at an established film entertainment company. Prerequisite: FIL2480C; (15 hr. lecture)

FIL2949
Co-op Work Experience 2: FIL
3.00 credits

This course is designed to continue training in student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisites: Co-Op Department approval and completion of 1949 Co-Op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-Operative Education Office to obtain registration approval. Prerequisite: FIL 2515C. (3 hr. lecture)

FIL3602
Production Management
3.00 credits

In this upper division course for BAS student's in Film, Television & Digital Production students will learn the theory and practice of managing film and television production with an emphasis on

pre-production processes and software. Prerequisite: FIL2611, MMC2000 (3 hr. lecture)

FIL3651
Business Proposals for Film & Television
3.00 credits

In this upper division course for BAS student's in Film, Television & Digital Production students will learn the theory and practice of business plans/grant proposals in media production funding. Prerequisite: FIL2611, MMC2000. (3 hr. lecture)

FIL4164
Advanced Writing for Film and Television
3.00 credits

In this upper division course in Film, Television & Digital Production students will learn the process of completing a long form motion picture or television script. Prerequisite: RTV2300, FIL2131. (3 hr. lecture)

FIL4585C
Production Workshop 1
4.00 credits

In this production course, students will learn and apply industry-standard pre-production and production techniques to produce a fiction or non-fiction film. Students will go through a selection process to determine their crew positions on the production. Prerequisite: DIG3347C, fil3605 (2 hr. lecture; 2 hr. lab).

FIL4586C
Production Workshop 2
4.00 credits

In this upper division workshop for BAS Students in Film, Television & Digital Production students will learn to apply industry-standard post-production techniques to complete Production Workshop 1 projects. Prerequisite: FIL4585C; (2 hr. lecture 2hr. lab)

RTV1000
Fundamentals of Broadcasting
3.00 credits

In this introductory course for television and radio broadcasting, students will learn

about the foundations of the American broadcast system. (3 hr. lecture)

RTV1100
Writing for Electronics Media
3.00 credits

This course should enable you to write comfortably for the media in a variety of formats. You will be introduced to analysis and preparation of scripts that emphasizes common principles of wording for mass media of communication and formats peculiar to each medium. You should learn basic broadcast principles of copy preparation, first for radio and then for the added requirements of television news. Particular attention will be given to commercials and public service announcements. There will be opportunities to study and write documentaries and other long-form programs. At the end of the course, you should understand what goes into a script and have the ability to write a workable script in the medium of your choice. (3 hr. lecture)

RTV1240C
Sound Design
3.00 credits

In this introductory Sound Design course students will learn an overview of sound recording and audio post-production. (4 hr. lecture)

RTV1241C
Television Production 1
4.00 credits

An introductory overview of the practices and procedures used in a television studio. Students will learn basic operation of studio and control room equipment and work towards the completion of broadcast standard projects. (2 hr. lecture 4 hr. lab)

RTV1242C
Television Production 2
4.00 credits

An intermediate course in television studio production. Students will learn to implement the fundamentals as introduced in Television Production 1 to the production of scripted programs. Prerequisite: RTV1241C (2 hr. lecture 4 hr. lab)

RTV2205C
Television Workshop
3.00 credits

Production of TV shows from the script to the taping and the fully edited master. Includes post production if required. This course combines learning outcomes from all previous production courses through professional level productions. Prerequisite: TV 2246C. Laboratory fee. May be repeated for credit. (1 hr. lecture; 4 hr. lab)

RTV2230C
Radio and Television Announcing
3.00 credits

In this introductory class the student will learn about the processes used by On-Air Talent in television and radio production. (2 hr. lecture 2 hr. Lab)

RTV2243C
Directing
3.00 credits

An introductory overview of television directing. Students will learn the responsibilities of the television director in coordinating production elements and television control room techniques. Prerequisite: RTV1242C; (2 hr. lecture 2 hr. lab)

RTV2245C
Electronic Field Production 1
4.00 credits

An introductory course in which students will learn single-camera field production and electronic news gathering. Prerequisite: RTV1242C; (2 hr. lecture 4 hr. lab)

RTV2246C
Electronic Field Production 2
4.00 credits

In this intermediate workshop style class students will learn about documentary production. Prerequisite: RTV2245C; (2 hr. lecture 4 hr. lab)

RTV2252
TV/Video Pre-Production
2.00 credits

Students will learn all aspects of pre-production planning and preparation including analyzing and interpreting scripts, storyboards, fax sheets, and set designs, casting wardrobe and make up considerations and

they will learn to prepare a location and studio set-up. (1 hr. lecture; 2 hr. lab)

RTV2300
Broadcast Writing
3.00 credits

In this intermediate workshop style class students will learn broadcast writing emphasizing news, documentary, commercials, and long-form programming. (1 hr. lecture 2 hr. lab)

RTV2940
Television Internship
3.00 credits

In this lower division internship designed for AS students in Television Production, students will learn to apply skills and knowledge learn in the program at an established television entertainment company Prerequisite: RTV1242C; (144 hr. Internship).

RTV2941
Fall Television Practicum
3.00 credits

This course is an advanced internship with limited enrollment requiring departmental approval. Students will learn advanced camera and lighting techniques, while assisting in the production of shows for Cable-TAP television. Miami-Dade County's official community access channel. AS degree credit only. Prerequisite: RTV 1242C. (6 hr. lab)

RTV2942
Spring Television Practicum
3.00 credits

This course is an advanced internship with limited enrollment requiring departmental approval. Students will learn advanced camera and lighting techniques, while assisting in the production of shows for Cable-TAP television. Miami-Dade County's official community access channel. AS degree credit only. Prerequisite: RTV 1242C. (6 hr. lab)

RTV2943
Summer Television Practicum
3.00 credits

This course is an advanced internship with limited enrollment requiring departmental approval. Students will learn advanced directing and floor management techniques, while

assisting in the production of shows for Cable-TAP television, Miami-Dade County's official community access channel. Prerequisite: RTV 1242C. AS degree credit only. (6 hr. lab)

RTV3256C
Advanced Post Production
3.00 credits

An advanced course in which students will learn complex digital media post production techniques. Prerequisite: FIL2553C. (2 hr. lecture 2 hr. lab)

RTV3277C
Television Studio Production Workshop
3.00 credits

In this upper division workshop class for BAS students in Film, Television & Digital Production students will learn advanced television studio production techniques for pre-scripted programs. Prerequisite: RTV2246C, FIL2515C. (2 hr. lecture 2 hr. lab)

RTV3408
Ethics & Research for Non-Fiction Scripts
3.00 credits

In this upper division course students will learn research methods applicable to documentary production. Prerequisite: FIL2131, RTV2300. (3 hr. lecture)

RTV3810C
Broadcast Design & On-Air Promotions
3.00 credits

In this upper division course in BAS in Film, Television & Digital Production students will learn about on-air promotions with specific emphasis on layout, color, and composition. (2 hr. lecture 2 hr. lab)

VIC1000
Visual Communications
3.00 credits

An introductory course in which students will learn the visual aspects of film, video, photography and graphic arts, specifically dealing with design elements and principles. (2 hr. lecture 2 hr. lab)

VIC1205C
Video Compositing and Motion Graphics 1

3.00 credits

This course is an introduction to visual effects for film and television. The student will learn basic level techniques of still and motion graphic design in visual effect compositing for film and video using Photoshop and After Effects. Prerequisite: FIL 2552C. Laboratory fee. (2 hr. lecture; 2 hr. lab)

Finance

FIN1930
Special Topics Seminar
1.00-3.00 credits

This course centers around topics of current interest or of special interest. Topics or focus may vary from semester to semester. (1 hr. lecture)

FIN2000
Principles of Finance
3.00 credits

The creation, allocation, and utilization of money, and the effect of monetary policy upon individuals, business, national and international economics. This course provides a basis for further study of monetary theory, banking, finance and securities. (3 hr. lecture)

FIN2010
Investments in Stocks and Bonds
3.00 credits

The basic principles of the stock market as they affect the individual investor in stocks and bonds. Investment in these securities is studied from the standpoint of the short-term and long-term investors. (3 hr. lecture)

FIN2031
Risk Management & Compliance
3.00 credits

This course offers an analysis of the risks faced by investors and savers interacting through both financial institutions and financial markets. It will provide insight at the risks and opportunities of doing business in today's financial markets and

the challenges presented by both regulators and market participants. The course will review the increasing integration of foreign and domestic financial markets. (3 hr. lecture)

FIN2032
Fundamentals of Wealth Management, Institutions, Markets and Products
3.00 credits

This course is a standard introduction to the financial services profession, financial markets, and financial institutions. It touches on nearly every aspect of financial services. It assists professionals in understanding concepts, markets, products, regulations and the application of financial planning and development of wealth management skills. Prerequisite: ACG 2021, 2021L, BAN2210. (3 hr. lecture)

FIN2051
International Financial Management
3.00 credits

The student will learn basic concepts and principles of international finance, with consideration of the financial environment, transactions, and flows. Exchange rates, risks, and government policies affecting business are analyzed as well as management policies and decisions. Special fee. (3 hr. Lecture)

FIN2100
Personal Finance
1.00 - 3.00 credits

A study of economic and personal goals including personal budgeting, credit budgeting, borrowing money, banking facilities, the nature of investments, life insurance, casualty insurance, home ownership, stocks and bonds, and retirement plans. (1-3 hr. lecture)

FIN2642
Financial Analysis & Valuation
3.00 credits

This course will cover financial institutions, financial Investments, financial planning and analysis and international financial perspectives. It addresses core principles of value creation, merger, analysis of historical financial performance, cash flows and

the identification of sources of value. (3 hr. lecture)

FIN2990
CBE Financial Services Operations and Specialist
1.00 - 18.00 credits

The FIN 2990 Operations and Specialist course is designed to assess students' mastery of competencies and skills necessary for a successful career in financial services. The course accelerates the development of market assessment and financial acumen competencies as well as competencies related to written and oral communication skills. The course provides learners with an exceptional opportunity for higher level study and professional growth in the field of credit and business lending. Upon successful completion of FIN 2990 learners will receive two College Credit Certificates (CCCs)—Banking Operations (CCC) and Banking Specialist (CCC). Prerequisite: ACG2001, ACG2011, ACG2011L, ACG2001L or ACG2021, ACG2021L

FIN4303
Financial Markets and Institutions
3.00 credits

Students will learn the importance of financial markets and the role financial intermediaries' play. Emphasis will be upon the objectives and policies of financial intermediaries within the constraints of the law and regulatory authorities. Must pass course with a grade of "C" or higher. Special fee. (3 hr. Lecture)

Fire Science

FFP1505
Fire Prevention
3.00 credits

Florida State Fire Marshals regulations as they relate to fire prevention. Surveys of other authoritative sources, codes and ordinances such as the National Fire Code, miscellaneous model codes, underwriter's laboratory, and the fire prevention intent of various codes. (3 hr. lecture)

FFP1710
Supervision-Leadership for Fire Officers

3.00 credits

Analysis of the broad concepts of supervision and leadership to analyze the kinds of effective leadership-followership needed in the fire services, and how roles and attitudes must change in the high stress conditions to which fire fighters are routinely exposed. One of four courses recommended by the Florida Fire Standards Council for Pre-Officer Training. (3 hr. lecture)

FFP2120
Building Construction for Fire Science

3.00 credits

A study of buildings fire codes; life safety and OSHA fire protection codes; a study of basic building construction files and the behavior of building materials during a fire; a survey of research and standards development. (3 hr. lecture)

FFP2301
Fire Hydraulics

3.00 credits

The basic theories of hydraulic as applied to the fire services. The mathematics and formulas necessary to solve fire stream calculations and any such variables. Prerequisites: MTB 1321 or equivalent ability to square numbers and perform square roots is required. (3 hr. lecture)

FFP2305
Fire Apparatus and Equipment

3.00 credits

Various mechanical, hydraulic, pneumatic and electrical systems found on heavy duty, high performance fire apparatus. Why and how major parts work, their relationship, and the emergency procedures followed to make equipment apparatus are studied. Prerequisite: FFP 2301. (3 hr. lecture)

FFP2401
Hazardous Materials 1

3.00 credits

An introduction to flammable hazardous materials and the basic chemical and physical properties of matter as found in solid, liquid or gaseous forms. Hazardous envi-

ronmental conditions and the interaction of materials are discussed. (3 hr. lecture)

FFP2402
Hazardous Materials 2

3.00 credits

A further study of hazardous materials with emphasis on unstable chemicals; explosive substances and their handling; exotic fuels (solids and liquid propellants); pesticides, corrosive toxic and radioactive substances. Standard operating procedures for fire departments will be discussed. Prerequisite: FFP 2401. (3 hr. lecture)

FFP2510
Fire and Building Codes

3.00 credits

The national, state and local municipal fire codes with emphasis on local laws and ordinances related to life-safety features designed into structures of all types. Emphasis is on the fire prevention requirements of the South Florida Building Code. Prerequisite: FFP 1710. (3 hr. lecture)

FFP2521
Blueprint Readings and Plans Review

3.00 credits

A study of building construction plans review and examination with an emphasis on building integrity, Life Safety and code compliance. Prerequisite: FFP 2810. (3 hr. lecture)

FFP2540
Fire Detection and Suppression Systems

3.00 credits

Various electronic fire detection devices and systems; the kinds and operation of various mechanical and automatic suppression systems, and the chemical reactions that various suppressants make when in contact with hazardous materials. (3 hr. lecture)

FFP2590
Fire Inspector Preparation

1.00 - 9.00 credits

Life/fire safety and building codes used by all fire department inspectors in Greater Miami-Dade County as well as inspection process, procedures and reporting requirements for each occu-

pancy classification. Successful completion of the course leads to specialized certification as a Fire Inspector. Prerequisite: Permission of department chairperson. (1-9 hr. lecture)

FFP2604
Arson Detection and Investigation

3.00 credits

An introduction to arson laws and types of incendiary fires. Students study methods of determining fire cause, recognizing and preserving evidence, the phenomenon of pyrolysis; normal patterns of structural fires; interviewing witnesses, court procedures and giving court testimony. Prerequisite: FFP 2301. (3 hr. lecture)

FFP2700
Fire Department Management

3.00 credits

The municipal supervision-management policies, practices and procedures necessary to keep the firefighting team ready to implement fire prevention/suppression activities. One of four courses recommended by the Florida Fire Standards Council for Pre-Officer Training. Prerequisite: FFP 1710. (3 hr. lecture)

FFP2740
Fire Service Instructor

3.00 credits

The instructors' responsibilities in transmitting good study habits, class communication; human relations; learning and teaching concepts; job analysis, identifying teaching objectives; teaching methods and techniques; instructional aides and criteria and performance based evaluations. One of the four elements of instruction required by the Florida Fire Fighter Standards Council for Pre-Officer Eligibility. Prerequisite: ENC 1101. (3 hr. lecture)

FFP2741
Fire Service Instructor (Course Design)

3.00 credits

Fire Service Instructor (Course Design) emphasizes techniques that will assist the Fire Service Instructor develop skills in curriculum development including the importance of an active training program. Students will learn

the principles of effective curriculum design for adult and student centered learning. They will understand how to design courses and units related to learning, teaching, performance, and behavioral objectives. The State Fire Marshal, Bureau of Fire Standards and Training require this course for instructor II and III certification. This certification enables the instructor to teach higher-level courses (i.e.: Fire Officer I and II, Fire Inspector). (3 hr. lecture)

FFP2810
Fire Fighting Tactics and Strategy
3.00 credits

The principles of efficient utilization of manpower, equipment, and apparatus with emphasis on pre-fire planning, decision making and problem-solving related to fire-ground tactics. One of four courses recommended by the Florida Fire Standards Council for Pre-Officer Training. Prerequisite: Sophomore standing in program or employed Fireman. (3 hr. Lecture)

Food Service

FOS2203
Safety and Sanitation
2.00 credits

This course is an introduction to food environmental sanitation and safety in a food production area. Attention is focused on food-borne illness and their origins, and on basic safety procedures followed in the food service industry. (2 hr. lecture)

FSS1100
Foodservice purchasing
3.00 credits

This is an introductory course in which students will learn the principals of menu planning for various types of facilities and service as well as menu layout, selection, development and pricing structures. Students will learn the principals and practices concerned with the purchase and receipt of food, supplies and equipment for various food service operations. Prerequisites: FSS 1200, 1202L. (3 hr. lecture)

FSS1200
Culinary Terminology and Procedures
3.00 credits

This is an introductory course in industry vocabulary, terminology, knowledge, skills, and practices. The students will learn standard kitchen phrases, how to identify and describe equipment, recipe reading, costing, conversion formulas, product identification, measurements and basic cooking procedures. Co-requisites: FSS1202L (3 hr. lecture)

FSS1202L
Food Production 1
3.00 credits

This course is an introductory kitchen lab experience in which students will be provided hands-on orientation to tools, equipment, recipe production, measurements, knife cut techniques and basic cooking procedures. Students will practice classic cooking methods, product identification and the functions of the production kitchen in a "green" team environment. Corequisite: FSS 1200. (6 hr. lab)

FSS1204L
Food Production 2
3.00 credits

This is a lab course in which students will reinforce the skills that they learned in Production 1. Students will learn cooking methods, knife skills, and applied principles of cooking techniques. The course will emphasize portion control, work plans, and organization and production schedules. This course reviews stock and sauce making, explores modern cooking methods, the use of applicable equipment, and regional and nutritional cooking. Pre-requisites: FSS1200, and FSS1202L (6 hr. lab)

FSS1246C
Basic Baking
3.00 credits

This is an introductory course in which students will learn the fundamentals of baking science, terminology, equipment, ingredients, weights, measures formula conversion and storage. Students will learn the functions of various baking ingredients and execute baking recipes and competencies including doughs, breads, cookies,

pies, puff pastries, sweet & savory pastry fillings, quick breads, cakes and basic decorating techniques. Prerequisite FSS 1200, 1202L. (1 hr. lecture; 2 hr. lab)

FSS2205L
Food Production 3
3.00 credits

This capstone course will reinforce the skills learned in the prerequisite classes. Students will learn how to brew beer, pair wine and food, and review the distillation process for spirits through hands on experiences as well as practices in dining room management and tableside cooking. Knife skills, stock and sauce making, moist heat cooking methods, dry heat cooking methods and combination cooking methods will be reviewed on an advanced level. The student will review butchery, seafood and modern cooking methods. Pre-requisites: FSS1200, and FSS1202L, and FSS1204L, and FSS2242C, and FSS1246C, and FSS2248C (6 hr. lab)

FSS2242C
International Cuisines
3.00 credits

This is an advanced course in which students will reinforce their knowledge of equipment, vocabulary and theories learned in prerequisite classes. Students will learn to use global ingredients, explore international cooking techniques and methods and be exposed to equipment specific to a world region. Students will have the opportunity to develop international menus and prepare dishes from many different countries. Prerequisites: FSS1200, 1202L, 1204L (1 hr. lecture; 4 hr. lab)

FSS2248C
Garde Manger
3.00 credits

This is an intermediate course in the preparation of foods from the cold kitchen. Students will learn to prepare sausages, cheese, cured foods, terrines, hors oeuvres and cold soups and sandwiches. Students will also be exposed to carving and buffet layout. Production methods and safe food handling techniques are re-emphasized. Pre-requisites: FSS1200, and FSS1202L, and FSS1204L (1 hr. lecture; 4 hr. lab)

FSS2381L
Culinary Management Practicum
4.00 credits

This required practicum is designed to provide hands on culinary training through industry work experience. Students will be located in an approved site to reinforce their skills while being exposed to various stations in a food services operation. Students will learn to actively participate in various aspects of the operation including cooking, cost controls, and sanitation programs. Prerequisites: FSS2205L (192 hr. Practicum)

FSS2950L
Culinary Competition
3.00 credits

This advanced course will strengthen the student's ability to utilize various culinary methods learned in prerequisite courses. The student will learn about the American Culinary Federation certification tests, guidelines and competitions. In addition, students will utilize their skills by participating in on site and recorded demonstrations. The class will reinforce and develop timing, teamwork and menu development. Prerequisites: FSS1200, 1202L, 1204L, 1242C, 1248C. (6 hr. lab)

Foreign Languages (In Translation)

FOT 2220
Localization and Project Management
3.00 credits

Software and website localization is a new and growing area of translation and is closely linked to the concepts of globalization and internationalization in electronic communications. In this introductory course students will learn how to adapt software for international markets as well as to how to translate websites. Students will also be introduced to basic concepts in localization project management. Prerequisite: FOT2802, FOT2825. (3 hr. lecture)

FOT 2701
Simultaneous Conference Interpretation
3.00 credits

This course builds on the foundation established in the previous Simultaneous Interpretation Strategies course. Students will continue developing their simultaneous interpretation skills through exercises such as shadowing, decalage, paraphrasing, etc. Through a variety of authentic recording materials, students will practice the simultaneous interpretation mode in the context of international organizations and conferences so as to acquire smooth delivery techniques while forming professional habits both in conference booths. Extensive practice in simultaneous interpretation will be provided both in class and online. Prerequisite: FOT2824. (3 hr. lecture)

FOT2802
Introduction to Translation
3.00 credits

Develops the ability to do accurate written translations in general. Includes the application of contrastive structures and grammar rules of source and target languages; translation of idiomatic expressions and an introduction to legal and technical vocabulary; the use of bilingual dictionaries and glossaries. The demands of translation as a profession and its code of ethics are stressed. (3 hr. lecture)

FOT2821
Introduction to Interpretation
3.00 credits

The acquisition and development of the abilities to convert an oral message from the source language into another consecutive oral message in the target language. (3 hr. lecture)

FOT2822
Court Interpreting Skills
3.00 credits

Continuation of FOT 2821 including deepening and broadening the type of exercise of FOT 2821 and gradual introduction to simultaneous interpretation. Oral translation with notes and conversations, ratio or tape passages. Extensive practice in the process of hearing, understanding, remem-

bering and speaking for simultaneous oral interpretation. Participation in an internship or practical training program. (3 hr. lecture)

FOT2823
Consecutive Interpretation
3.00 credits

This course builds on the foundation established in Introduction to Interpretation (FOT2810) and acquaints the students with the practice and application of consecutive interpretation (English/Spanish). Development of active listening, concentration and retention skills as well as the ability to perceive essential meaning for subsequent recall is emphasized. This course also explores basic note taking techniques and provides practice in monolateral and bilateral consecutive interpretation. Prerequisite: FOT 2821. (3 hr. lecture)

FOT2824
Simultaneous Interpretation Strategies
3.00 credits

This course builds on the foundation established in previous interpretation courses while introducing the students to simultaneous interpretation (English/Spanish) by providing preparatory exercises such as shadowing, lagging, paraphrasing etc. Through a variety of recorded materials, students practice the simultaneous interpretation mode so as to acquire smooth delivery techniques while forming good professional habits. Prerequisites: FOT 2821, 2823. (3 hr. lecture)

FOT2825
Computer Assisted Translation 1
3.00 credits

Examines the types of translation software currently used in the translation/interpretation profession as well as the commercial use and business application of these. Description and application of tools such as translation memory, electronic dictionaries, desktop-publishing systems, and website translation technologies are covered. Prerequisite: CGS 1060. (3 hr. lecture)

FOT2826
Legal Translation
3.00 credits

Continuation of FOT 2802. Written translations of multi-page documents and/or articles containing legal, technical and other specialized vocabulary from the source language into the target language. Firsthand translation experience by participating in a "translator's bureau," or an "internship" or practical training program. (3 hr. lecture)

FOT2827
Medical Translation
3.00 credits

This course further develops translation strategies while familiarizing the student with the characteristics of medical and health-related discourse in both English and Spanish. Included is the acquisition of medical and hospital/clinic terminology and the analysis of related linguistic structures so students can engage in translating texts from English into foreign language and vice versa. Prerequisites: FOT 2802, 2803. (3 hr. lecture)

FOT2828
Medical Interpretation
3.00 credits

This course develops the techniques, practices and knowledge needed to function as interpreters in a medical environment. Interpreting models such as sight, consecutive and simultaneous - as they apply to the medical setting - are revisited. Medical vocabulary/terminology in English and foreign language as well as code of ethics will also be introduced. Prerequisites: FOT 2821, 2823, and FOT 2824(recommended). (3 hr. lecture)

FOT2829
Financial and Business Translation
3.00 credits

This course further develops translation strategies while familiarizing the students with the characteristics of financial and business discourse in both English and Spanish. Included is the learning of special terminology and related linguistic structures so students can engage in the translation of texts containing financial/business or economic discourse from English into Spanish and vice versa. As in legal translation, stu-

dents engage in terminology research and glossary development through the use of specialized bilingual financial and business dictionaries and other pertinent sources. Prerequisites: FOT 2802, 2803. (3 hr. lecture)

FOT 2835
Court Interpretation Skills II
3.00 credits

This course consolidates the skills learned in the previous Court Interpretation course (FOT 2822 Court Interpreting Skills), and continues developing sight translation, consecutive and simultaneous skills with emphasis in expert witness testimony. Attention is given to the development of specialized terminology in ballistics, finger printing, DNA analysis, controlled substances, among others. As part of this course, students will have to complete the 40 hours of court proceeding observation required by the state in order to take the Court Interpreter State Certification Examination. Prerequisite: FOT2822. (3 hr. lecture)

FOT2991
Introduction to Interpretation Theory
3.00 credits

Students will learn to explore basic linguistic concepts including phonology, morphology, syntax, pragmatics and semantics. This course will also focus on how a language is organized and functions, and will establish a connection between Linguistics and Translation Theory. It also addresses current trends in Tractology as a basis for understanding Interpretation as a process, and its implications in interpreters' performance. (3 hr. lecture)

FOT2992
Introduction to Medical Interpreting Skills
3.00 credits

Course Description: Students will learn the techniques, practices and knowledge needed to function as interpreters in a medical environment. Interpreting modes such as sight, consecutive and simultaneous – as they apply to the medical setting – are revisited. Though this is a language neutral skills course, simulations will be conducted in the working languages of the participants whenever possible. (3 hr. lecture)

FOT2993
Cross-Cultural Communication for Interpreters
3.00 credits

Course Description: This course provides the participants with the opportunity to identify cross-cultural issues and their impact on interpretation encounters. Students will analyze concepts such as communication, culture, cultural identity, non-verbal communication, and cultural context related to interpretation. (3 hr. lecture)

FOT2994
Ethics for Medical Interpretation
3.00 credits

Course Description: Students will learn the roles, responsibilities, and boundaries of the interpreter in medical interviews and procedures involving provider and patient. Special consideration is given to privacy concerns and the ethical guidelines of interpreting in a medical setting. Prerequisite: FOT2992. (3 hr. lecture)

French Language and Literature

FRE1120
Elementary French 1
4.00 credits

An integrated (multi-media) approach to acquire proficiency in the basic skills (of the language)-listening/understanding, speaking, reading, writing, and across-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice in class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

FRE1121
Elementary French 2
4.00 credits

A continuation of FRE 1120. A proficiency-oriented course emphasizing the mastery of the basic skills of the language. Prerequisite: FRE 1120. (4 hr. Lecture)

FRE2220
Intermediate French 1
4.00 credits

Students will learn to understand, speak, read, write, and gain cultural awareness of French through a systematic review (using an integrated, multimedia approach) of reading grammar, and writing skills with emphasis on oral and written communication. Prerequisite: FRE 1121 or equivalent. (4 hr. lecture)

FRE2221
Intermediate French 2
4.00 credits

This is a continuation of Intermediate French 1. Students will learn to understand, speak, read, and write French. Students will also learn to develop cross-cultural awareness through a systematic review of reading and writing skills with emphasis on oral as well as written expression. Prerequisite: FRE2220 or equivalent. (4 hr. lecture)

FRE2240
French Oral Expression 1
3.00 credits

Developing skills in conversation. Oral structures. Vocabulary expansion. Phonetic correction. Level 1. Offered through Overseas Study Program. (3 hr. lecture)

FRE2241
French Oral Expression 2
3.00 credits

Developing skills in conversation. Oral structures. Vocabulary expansion. Phonetic correction. Level 2. Offered through Overseas Study Program. (3 hr. lecture)

FRW2010
Selected Readings in French Literature 1
3.00 credits

A study of outstanding works authors, genres, or literary currents in France. (3 hr. lecture)

FRW2011
Selected Readings in French Literature 2
3.00 credits

A study of outstanding works, authors, genres, or literary currents of French

expression in francophone nations or areas. (3 hr. lecture)

Funeral Services Education

FSE1000
History of Funeral Service
3.00 credits

This course traces the origins of funeral service practice from antiquity to modern day practice. Students will learn the evolution of the ethical obligations, fundamental requirements, skills, aptitudes, and qualifications of funeral service professionals. Requires a grade of C or better to pass the course. (3 hr. lecture)

FSE1080
Funeral Law
3.00 credits

Federal, state and municipal statutes, rules, regulations and ordinances pertaining to funeral service; torts, contract and administrative laws, and financial disclosures pertinent to funeral operations and management. (3 hr. lecture)

FSE1105
Funeral Service Chemistry
3.00 credits

A survey of the basic principles of chemistry as they relate to funeral service. Especially stressed are the chemical principles and precautions involved in sanitation, disinfection, public health and embalming practice. (3 hr. lecture)

FSE2060
Funeral Directing
3.00 credits

Study of various religious, fraternal, military, traditional, nontraditional and humanistic variations of funeral ceremonies, including cultural, ethnic and geographic customs. (3 hr. lecture)

FSE2061
Thanatology
3.00 credits

Psychological and sociological dynamics of death, dying, and bereavement. Dynamics of counseling demonstrated through

role-playing video critique and analysis. Prerequisite: FSE 1000. (3 hr. lecture)

FSE2100
Embalming 1
3.00 credits

Orientation to basic embalming skills, case analysis, chemical composition, post-mortem changes, instrumentation and disinfection. Corequisite: FSE 2100L. (3 hr. lecture)

FSE2100L
Embalming 1 Laboratory
2.00 credits

This laboratory course complements the lecture co-requisite FSE2100. With hands-on experience in the preparation room, students will learn the foundational techniques associated with disinfection and preservation of human remains. Co-requisite: FSE2100. Recommended Preparation: BSC1084 is recommended prior to enrolling in FSE2100L. Special fee. (4hr. lab)

FSE2106
Funeral Service Microbiology
3.00 credits

This course is a survey of the basic principles of microbiology as it relates to Funeral Science. It emphasizes the importance of sanitation, disinfection, public health in the embalming practice. (3hr. lecture)

FSE2120
Restorative Art
3.00 credits

Anatomical study of human features; familiarization with instruments, human proportions, special materials and techniques. Corequisite: FSE 2120L. (3 hr. lecture)

FSE2120L
Restorative Arts Lab
1.00 credits

Laboratory for FSE 2120. Practice and techniques in reconstructive modeling. Corequisite: FSE 2120. Laboratory fee. (2 hr. lab)

FSE2120C
Restorative Art
4.00 credits

The student will learn the anatomical study of human features; familiarization with instruments, human proportions, special materials and techniques in restoration of human remains. Practical application of techniques found in funeral service reconstructive modeling and restoration. Prerequisite: FSE2100. (3 hr. lecture 2 hr. lab)

FSE2140
Embalming 2
3.00 credits

Emphasis on embalming considerations and procedures for pathogenesis and advanced decomposition, use of specialized chemicals, treatment of post-mortem cases and advanced techniques. Corequisite: FSE2140L. (3 hr. lecture)

FSE2140L
Embalming 2 Laboratory
2.00 credits

This course is a continuation of FSE2100 and complements the lecture co-requisite FSE2140. Students will learn advanced procedures to enhance their foundational knowledge of embalming technique as learned in the prerequisite classes FSE2100/FSE2100L. Learning the fundamentals of general embalming technique as outlined by the American Board of Funeral Service Education Standards will enable students to work in a preparation room as embalming apprentices to licensed embalmers. Prerequisites: FSE 2100, FSE 2100L. Co-requisite: FSE2140. Special fee. (4 hr. lab)

FSE2160
Funeral Service Pathology
3.00 credits

General, systemic and forensic pathology with emphasis on analysis of pre-and post-mortem histology, cytology and etiology. Students will learn the causative factors relating to death and determination of cause of death. (3 hr. lecture)

FSE2200
Funeral Service Accounting
3.00 credits

An introduction to basic principles of accounting theory. This subject covers financial statements and their analysis, journalizing, receivables, payables, deferrals, and accruals. Inventory costing models depreciation models and payroll accounting are included. Applications to funeral home operations are made throughout the subject material. (3 hr. lecture)

FSE2201
Funeral Home Operations
3.00 credits

Theoretical and practical training in all areas of funeral home operations; laboratory experience in merchandising and funeral arrangements. Corequisite: FSE 2200. (3 hr. lecture/lab)

FSE2202
Funeral Service Business Management
3.00 credits

The role and function of an effective manager is explored. Emphasis is placed on the management functions of planning, organizing, motivating, directing, and controlling. How to purchase a small business is also covered. (3 hr. lecture)

FSE2203C
Funeral Home Applications
3.00 credits

Funeral Home Applications reinforces the academic and theory of prior classes with hands on, practical exercises. Students will learn procedures on taking first call, buying and selling of merchandise, funeral arranging, and conducting funerals. Must complete this course with a grade of "C" or better. Prerequisite: FSE2060, FSE2201. (3 hr. lecture)

FSE2930L
Funeral Service Professional Review
2.00 credits

This course is offered for the Funeral Service student who is in their final semester of study. The course is a review of all the assessed material on the National Board Exam to help prepare the student for the examination and professional licensure. A

grade of "C" or better is required to successfully complete the class. Pre/Corequisite: FSE1000, FSE1080, FSE2060, FSE2061, FSE2100, FSE2106, FSE2120, FSE2140, FSE2201, FSE2203, FSE2160. (4 hr. lab)

FSE2931
Funeral Service Professional Review 1
1.00 credits

This course is for the Funeral Science student who is graduating and taking the National Board Examination at the end of the semester that this course is being offered. The course is a review of the science section of the Funeral Science courses in order to help prepare the student for the National Board Examination. Prerequisite: Permission of the department is required. (2 hr. lab)

FSE2932
Funeral Science Professional Review 2
1.00 credits

This course is for the funeral Science student who is graduating and taking the National Board Examination at the end of the semester that this course is being offered. The course is a review of the Arts section of the Funeral Science courses in order to help prepare the student for the National Board Examination. Prerequisite: Permission of the department is required. (2 hr. lab)

General Business

GEB1000
Business Career Strategies
3.00 credits

This course is designed to enable students to thrive in a competitive business environment. Students will learn business etiquette, alternative career pathways, personal financial management, and budgets. Additionally, students will learn interviewing, networking, and career development skills. (3 hr. lecture)

GEB1011
Principles of Business
3.00 credits

The student will learn the major disciplines of business including general business, business ethnics, forms of business

ownership, economics, management and leadership, human relations marketing, information systems, accounting, financial management, money and banking, and business law. Special fee. (3 hr. lecture)

GEB1949
General Business Internship 1
3.00 credits

This internship provides students with an opportunity to gain business experience while receiving academic credit. Students will learn to make connections between their internship experiences, academic coursework, and career goals. Students are required to complete 144 hours of internship in an organizational setting. (144 hr. Internship)

GEB2100
Introduction to Business Analytics
3.00 credits

This course is for students majoring in business, marketing, business intelligence, computer science and other majors and introduces how information and technology are used in organizations to create market advantage. Students will learn about the operational units of an organization and the information requirements to support the organization. (3 hr. lecture)

GEB2112
Introduction to Entrepreneurship
3.00 credits

Students will learn that start-ups are not smaller versions of big businesses. They are unique. This foundation course in business entrepreneurship covers the attributes of successful entrepreneurs, opportunity identification, opportunity analysis and development, as well as an overview of the key activities and functions which start-ups must address. (3 hr. lecture)

GEB2350
Introduction to International Business
3.00 credits

Provides an overview of the cultural environment of international business and the institution which affects business today. International economic, political, and trade

issues are analyzed in the context of socio-economic goals and policies of the nations involved. (3 hr. lecture)

GEB2949
General Business Internship 2
3.00 credits

This internship is a continuation of GEB 1949 and provides students with an opportunity to gain business experience while receiving academic credit. Students will learn to make connections between their internship experiences, academic coursework, and career goals. Students are required to complete 144 hours of internship in an organizational setting. Prerequisite: GEB1949. (144 hr. Internship)

GEB3213
Advanced Communication in Business
3.00 credits

Student will develop effective and efficient oral and written communications skills that can be applied in professional business settings. Topics include formal and informal writing, preparation of reports, creation of business proposal, written correspondence, and presentations.

GEB3358
International Negotiations and Transactions
3.00 credits

This course presents business negotiations in selected regions of the world. Students will learn the skills of negotiation by analyzing international business cases and developing solutions to situations. Topics include overseas market research using both domestic and international sources and the application of theoretical and practical business knowledge to foreign situations and trade negotiations. The importance of culture, language, and values in international negotiations is emphasized. Prerequisites: MAN 2021 and TRA 1154. (3 hr. lecture)

GEB4363
Import Export Management
3.00 credits

Students will learn the functions and range of traffic management services performed by freight forwarders, includ-

ing changes in governmental restrictions, rules, and regulations applicable to different countries, ports, and trade routes. Students will also learn the documentation needed to facilitate and coordinate the movement of goods in international trade and supply chain management systems. Prerequisites: MAN 2021 and TRA 2010. (3 hr. lecture)

GEB3522
Applied Business Analytics
3.00 credits

This upper division course is for students majoring in Data Analytics. Students will learn how to design and develop business analytic solutions to real-world problems using case studies. Students will gain experience working in small teams in deadline-driven environments and will present their results in class. Prerequisite: GEB2100. (3 hr. lecture)

Geography

GEO2420
Introduction to Cultural Geography
3.00 credits

This course is an introduction to cultural geography and is structured around the five basic themes in geography: location, place, human-environment interaction, movement and regions. The student will be exposed to the differences between places, the dynamic aspects of culture and the physical environment. Lastly, the course will heighten the student's awareness of the visible expressions of culture and landscape. (3 hr. lecture)

Geographic Information System

GIS 1040
Introduction to GIS Technology
4.00 credits

This course is introductory and first in a sequence of Geographic Information Systems (GIS) courses that make up the new CCC in Geographic Information Systems Technology. The course is also

being added as a new elective option for the AS in Information Systems Technology. Laboratory fee. (3 hr. lecture, 2 hr. lab)

GIS 2045

Intermediate GIS Technology

4.00 credits

This course teaches intermediate-level concepts of Geographic Information Systems (GIS). The student will acquire an understanding of discrete geocoding and georeferencing, data input, working with spatial databases, and data creation. At the end of the course, the student will be able to perform intermediate-level operations in GIS software. Prerequisite: GIS 1040. Laboratory fee. (3 hr. lecture, 2 hr. lab)

GIS 2046

Advanced GIS Technology

4.00 credits

This course teaches advanced concepts of Geographic Information Systems (GIS). The student will learn how to use vector, raster and 3D data, geospatial structures, and write GIS functions using a programming language. At the end of the course, the student will be able to perform advanced operations in GIS software. Prerequisite: GIS 2045. Laboratory fee. (3 hr. lecture, 2 hr. lab)

GIS 2047

Applications of GIS Technology

4.00 credits

This course teaches the principles of urban analytics and disaster management through what-if scenario modeling in which risks are evaluated and managed in order to support better decision making. By the end of the course, the student will apply a remote sensing technique to generate GIS data. Prerequisite: GIS 2045. Laboratory fee. (3 hr. lecture, 2 hr. lab).

Geology

ESC1000

General Education Earth Science

3.00 credits

Selected concepts and principles of earth science taken from the areas of astronomy,

geology, meteorology and oceanography. (3 hr. lecture)

GLY1010

Physical Geology

3.00 credits

The fundamental concepts of geological process and structures. Plate tectonics is integral to this course which is intended for both majors and non-majors. Majors are strongly advised to take GLY 1010L. (3 hr. lecture)

GLY1010L

Physical Geology Laboratory

1.00 credits

Laboratory for GLY 1010. Studies of common minerals and rocks and topographic and geologic maps along with aerial photography. Corequisite: GLY 1010. Laboratory fee. (2 hr. lab)

GLY1100

Historical Geology

3.00 credits

This is a historical based course in geology. The student will learn about the history of the earth, the evolution of life, radiometric dating, and the history of modern geologic ideas on earth development. (3 hr. lecture)

GLY1100L

Historical Geology Laboratory

1.00 credits

A laboratory course designed to accompany GLY1100 in the study of the History of the Earth. The student will learn the fundamentals of fossil identification, evolution, calculation of radiometric dates, interpretation of the stratigraphic record, and the role of plate tectonics in the evolution of life. (2 hr. lab)

GLY4701C

Geomorphology

4.00 credits

This course is a study of planetary surfaces and processes that create landforms. The students will focus on survey of geomorphic forms and the processes that originated them, application of remote sensing and GIS/GPS technology to study geomorphological processes,

analytical skills including field experience, and practical applications, especially to geological hazards. (3 hr. lecture, 1 hr. lab)

German Language

GER1120

Elementary German 1

4.00 credits

An integrated (multi-media) approach to acquire proficiency in the basic skills (of the language)-listening/understanding, speaking, reading, writing, and cross-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

GER1121

Elementary German 2

4.00 credits

A continuation of GER 1120. A proficiency-oriented course emphasizing the mastery of the basic skills of the language. Prerequisite: GER 1120. (4 hr. Lecture)

GER2220

Intermediate German 1

4.00 credits

Students will understand, speak, read, write, and gain cultural awareness of German through a systematic review (using an integrated, multimedia approach) of reading, grammar, and writing skills with emphasis on oral and written communication. Prerequisite: GER 1121 or equivalent. (4 hr. lecture)

GER2221

Intermediate German 2

4.00 credits

This is a continuation of Intermediate German 1. Students will learn to understand, speak, read, and write German. Students will also learn to develop cross-cultural awareness through a systematic review of reading and writing skills with emphasis on oral as well as written expres-

sion. Prerequisite: GER2220 or equivalent. (4 hr. lecture)

Graphic Arts

CGS2833

Intranet/Extranet Creation 4.00 credits

This advanced course teaches students a more comprehensive process of preparing and implementing CGI scripts into Web pages. Learn basic web scripting through decoding forms, sending e-mail, and reading and writing files. Design a scripted Web page, write the scripts, upload and run them. Debug scripts. By the end of the course, students are able to write their own guest books and surveys. Prerequisites: Graphic Interface Design 2. Special fee. (2 hr. lecture; 4 hr. lab.)

GRA111C

Graphic Design Fundamentals 4.00 credits

The basics of graphic design comprise this introductory course. The student will analyze the principles and practices of graphic design, and evaluate their creative solutions to challenging design problems. Topics include design vocabulary, elements and principles, the design process, proportion and composition, creativity and visualization, as well as color and typography basics. Assignments are designed to emulate real-world projects, including brainstorming, design, execution, critique, revision and implementation. (2 hr. lecture; 4 hr. lab.)

GRA113C

Visual Identity & Branding Design 4.00 credits

Studio projects involving visual identity and branding design will comprise this intermediate course. The student will examine color theory, branding, and best practices to develop unique and impactful brands, including sustainability and brand value. The student will design logos and style manuals. Trademarks and copyrights will be examined. Prerequisites: GRA111C, GRA1206C, GRA2117C. (2 hr. lecture; 4 hr. lab.)

GRA1206C

Typography Fundamentals 4.00 credits

The student will design with type in this introductory course. The student will examine readability vs. legibility, the history of type, type anatomy and how to classify type into groups. The student will examine typographic layout design and how the principals of design apply. Studio projects will introduce the student to expressiveness through typographic creativity, symbolism and abstraction to express a given topic or design solution. (2 hr. lecture; 4 hr. lab.)

GRA1280C

Digital Imaging Fundamentals 4.00 credits

The student will learn leading industry-standard image editing software is used to prepare photos for print and digital media in this introductory course. Topics include: resolutions, compositing, masking, correcting and enhancing, as well as applying styles and effects. Assignments are designed to emulate real-world projects, including composite images for graphic design, photographic editing, and web pages. (2 hr. lecture; 4 hr. lab.)

GRA1750

Web Design Fundamentals 3.00 credits

The basics of web design comprise this introductory course. An introduction to the history of the web, including current design trends, a survey of Internet architecture, as well as user experience fundamentals and usability will comprise this introductory-level course. The student will examine the structure and styling of web pages. Special fee. (2 hr. lecture; 2 hr. lab)

GRA1751

Fixed-Layout Web Design 4.00 credits

The student will design fixed-width layout web pages in this intermediate-level course. The student will apply knowledge and skills to the design and construction of single web pages and multi-page web sites using a visual editor. Topics include styling, linking, incorporating media, production

workflows, and the creation of web forms. Assignments emulate real-world projects, including ideation, design, creation, and revision, leading to portfolio-ready projects. Prerequisites: GRA1750. (2 hr. lecture; 4 hr. lab.)

GRA1752

Motion Graphics For Web Design 4.00 credits

This intermediate-level course examines web vector graphics and their ability to display illustrations and animations on a web page. An in-depth examination of web vector graphics which when combined with transitions and transformations, enables web designers to create dynamic online images and animations that are compatible across desktop and mobile web browsers. The student will create portfolio-ready web projects and animations. Prerequisites: GRA1750, GRA2117C. (2 hr. lecture; 4 hr. lab.)

GRA1753

Motion Design 1 4.00 credits

Best design practices and the twelve principles of animation are taught in this introductory course. The student will explore hand-drawn techniques and software tools used to create professional Motion Design projects in 2-D and 3-D environments. At the end of this course, a 15 second animated product advertisement will be produced. The student will demonstrate knowledge of outputting files formatted correctly for film, television and web application environments. Prerequisite: GRA1280C; Pre/Corequisite: GRA2117C (2 hr. lecture; 4 hr. lab)

GRA1754

Responsive Web Design 4.00 credits

The student will design fluid-layout and responsive pages in this intermediate-level course. Responsive web pages adapt to various devices and user preferences, and examines the advantages of responsive design, as well as the latest industry research reporting on statistics for mobile device use globally. Topics include: fluid grids, responsive typography and images, CSS media queries, "mobile first" workflows,

usability, tools and resources. Prerequisite: GRA1751. (2 hr. lecture; 4 hr. lab.)

GRA1949

Co-op Work Experience 1: GRA 3.00 credits

This is a course designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

GRA2117C

Digital Illustration Fundamentals 4.00 credits

The student will create illustrations using industry-standard vector-based illustration software. Topics include creating vector-based illustrations, leading to an illustration portfolio. Emphasis will be on both representational as well as commercial art styles. Assignments are designed to emulate real-world projects, including illustration, design, and typography. Prerequisites: none. (2 hr. lecture; 4 hr. lab.)

GRA2121C

Publication Design 4.00 credits

Studio projects focusing on periodical and catalog designs comprise this intermediate-level course. The student will apply knowledge and skills toward the design and creation of newsletters, magazines, catalogs, booklets, press media kits and interactive e-books. Emphasis will be on graphic design principles, composition, layout, pagination, style balance format and project planning. Prerequisites: GRA1111C, GRA1206C, GRA2117C. Pre/co-requisite: GRA1280C. (2 hr. lecture; 4 hr. lab.)

GRA2151C

Advanced Digital Illustration and Imaging 4.00 credits

This is an advanced course in digital illustration and imaging, building on existing skills to design and create portfolio-ready projects. Topics include: perspective illustration, advanced masking and compositing techniques, "comping" for layout presentations, outdoor advertisements or 3-D package designs. The student will explore optimizing graphics for web, animations and video. Prerequisites: GRA1280C and GRA2117C. (2 hr. lecture; 4 hr. lab.)

GRA2156C

User Interface and Experience Design 4.00 credits

In this intermediate-level course, the student will examine the design and creation of mobile applications. The student will create visual designs for mobile apps, as well as analyze how to build and distribute them. The student will apply skills and knowledge toward creating portfolio-ready design projects. Prerequisites: GRA1751, GRA1754. (2 hr. lecture; 4 hr. lab.)

GRA2162C

Motion Design 2 4.00 credits

The student will master the leading motion design software's interface and tools to create animated advertisements, broadcast graphics and title sequences in this intermediate-level course. This course presents the fundamentals of good design and creatively applying those basic principles to produce a 30 second animated piece. Projects include knowledge of outputting and formatting final files for Film, TV and Web application environments for client delivery. Prerequisite: GRA1753 (2 hr. lecture; 4 hr. lab.)

GRA2168C

Visual Effects & Compositing 4.00 credits

The student will explore the world of compositing and visual effects in this intermediate-level course. This course will offer skills in creating transition effects, compositing and motion tracking. Projects

include knowledge of outputting and formatting final files for Film, TV and Web application environments for client delivery. Prerequisite: GRA2162C (2 hr. lecture; 4 hr. lab.)

GRA2190C

Communications Design 1 3.00 - 4.00 credits

Problems in advertising design involving layout, lettering, current studio media, and reproduction processes. Prerequisites: ART 1202C or 1300C. (1-2hr. lecture; 4 hr. lab)

GRA2191C

Communications Design 2 3.00 - 4.00 credits

Advanced problems in commercial art concentrating on layout, mechanical art for reproduction and illustration technique. Prerequisite: GRA 2190C. (1-2 hr. lecture; 4 hr. lab)

GRA2203C

Portfolio and Business Practices for Designers 3.00 credits

This advanced course enables students to create a portfolio for self-promotion to prospective employers and clients. The student will revise and assemble projects accomplished throughout their career tracks. The student will also analyze best practices involved in the profession: pricing freelance assignments, contracts, intellectual property rights, and other professional requirements. Course is taken in the semester prior to graduation. Prerequisites: GRA2121C and GRA2151C. (2 hr. lecture; 2 hr. lab.)

GRA2207C

Capstone Project 4.00 credits

The student will apply cumulative knowledge and integrative skills to the design and creation of a professional-level project. The graphic/web design assignment shall meet the requirements specified in a case study or real-world project. Course is taken in the semester prior to graduation. Prerequisites: GRA2151C. (2 hr. lecture; 4 hr. lab.)

GRA2305C
Special Topics in Graphic Design
3.00 credits

An advanced course featuring in-depth focus on special topics of the professor's choice within the field of graphic design. Topics include but are not limited to graphic novel design and illustration, informational graphics, as well as sustainability and social responsibility. The student will develop a detailed analysis of concepts presented and the creation of portfolio-ready projects. Prerequisite: GRA2151C. (2 hr. lecture; 4 hr. lab.)

GRA2545C
Package Design
4.00 credits

The student will create package designs for use in retail sales, merchandising, and point-of-purchase in this introductory-level course. Assignments are designed to emulate real-world projects, including package construction, design, illustration and typography, leading to portfolio-ready projects. Prerequisites: GRA2151C. (2 hr. lecture; 4 hr. lab.)

GRA2546C
Advertising Design
4.00 credits

The student will design and create effective advertising campaign concepts for print, outdoor and digital media in this intermediate-level course. Studio projects will emphasize originality, brainstorming, ad layouts, creative copywriting and persuasion, culminating in portfolio-ready projects. Prerequisites: GRA1113C, GRA2151C. (2 hr. lecture; 4 hr. lab.)

GRA2727
Dynamic Web Design
4.00 credits

The student will design and create dynamic web pages. This course presents PHP programming language to enable students to reduce website maintenance, change content depending on date and time, collect user input from an online form, and link to a MySQL database to display product information. Studio projects culminate in portfolio-ready artifacts. Prerequisites:

GRA1754 and GRA2156C. (2 hr. lecture; 4 hr. lab.)

GRA2755
**Emerging Technologies For
 Multimedia Web Design**
3.00 credits

An examination of emerging web technologies encompasses this course. Topics may include (but are not limited to): content management systems, new visual editing applications, and the latest trends in web design. Studio projects culminate in portfolio-ready artifacts. Course is taken in the semester prior to graduation. Prerequisite: GRA2727. (2 hr. lecture; 2 hr. lab.)

GRA2765C
**Digital Motion Graphics for Broadcast
 Design**
4.00 credits

The student will use industry-standard software to create visual effects, compositing and motion graphics for television production. Time-based design elements of space, pacing, motion and interaction comprise this intermediate-level course. Assignments enable students to create portfolio-ready projects that include: logos, lower-thirds, and credit rolls that incorporate 3-D elements. Prerequisite: GRA2168C (2 hr. lecture; 4 hr. lab.)

GRA2811C
Applied Illustration 1
3.00 - 4.00 credits

Exploration of fundamentals of composition, design and rendering in illustration. Development of skills in illustration techniques including pen and ink, opaque water color and combined mediums. Study of the creative processes applied to producing illustrations for the professional market. Prerequisites: ART 1201C, 1330C. (1-2 hr. lecture; 4 hr. lab.)

GRA2949
Co-op Work Experience 2: GRA
3.00 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and

employer. Prerequisite: Co-Op Department approval and completion of 1949 Co-Op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-Operative Education Office to obtain registration approval. (3 hr. lecture)

GRA2991C
SELECTED STUDIES
4.00 credits

This course is an introduction to the fundamentals of computer based 3D modeling for Film, TV, and Video Gaming applications. Pre-Requisite: ART 2600C; GRA 2577C; VIC 1202. (4 Hr. Lecture)

Haitian Language

HAI2340
Haitian-Creole for Native Speakers 1
3.00 credits

Writing spelling and punctuation, sentence-structure and vocabulary expansion as they are relevant to the training of native speakers of Haitian Creole. Conducted entirely in Haitian-Creole. Prerequisite: Fluency in Haitian-Creole as determined by the Haitian-Creole placement exam. (3 hr. lecture)

HAI2341
Haitian-Creole for Native Speakers 2
3.00 credits

A continuation of HAI 2340. Emphasizes fluency in Haitian-Creole grammar and writing. Recommended for translation/interpretation students or native speakers wishing to improve their knowledge of written Haitian-Creole. Conducted entirely in Haitian Creole. Prerequisite: Fluency in Haitian-Creole as determined by the Haitian-Creole placement exam or HAI 2340. (3 hr. lecture)

HAT2802
Contrastive Analysis: Haitian/Creole
3.00 credits

This course compares/contrasts linguistic features and characteristics of both the English and Haitian/Creole languages. Aspects of comparison/contrast include historical backgrounds, phonological sys-

tems, morphological systems, syntax, and semantics. Prerequisite: Adequate fluency in Haitian-Creole (determined by department Haitian-Creole exam) and English (determined by CPT) (3 hr. lecture)

HCW2020

Selected Readings in Haitian-Creole Literature 3 3.00 credits

This course will emphasize reading and analyzing Haitian-Creole literature in a historical context. A variety of literature will be read and discussed in order to gain an understanding of Haitian-Creole and Haitian culture, the history of Haiti, and ways which the literature portrays the country of Haiti and its inhabitants. Prerequisite: Fluency in Haitian-Creole as determined by the Haitian-Creole placement exam. (3 hr. lecture)

Health Information Management

HIM1000

Introduction to Health Information Technology 2.00 credits

This course examines the role and functions of a health information technician. Students will learn about the structure, organization, and maintenance of the medical record. Students will also learn about the organization and function of various types of health care facilities, the responsibilities of national, state and local health agencies, and the organization and mission of the American Health Information Management Association. (2 hr. lecture)

HIM1110

Health Information Technology and Data Collection 2.00 credits

This course is designed to provide the skills necessary to function in a health information management department. Students will learn health record data collection and informatics. Students will also learn about the various components and approaches of the electronic health record. Prerequisite:

HIM 1000, 2472; corequisite: HIM 1110L. (2 hr. lecture)

HIM1110L

Health Information Management Data Collection lab 3.00 credits

This course is designed to apply basic requirements imposed by regulatory agencies to health record data. Students will learn how clinical data repositories store health information. Concepts relating to confidentiality, ethics, and release of information will be applied. Prerequisite: HIM 1000, 2472; corequisite HIM 1110. (6 hr. lab)

HIM1300

Health Care Facility and Delivery Systems 2.00 credits

This course will examine healthcare complexities, function of various types of health facilities, accreditation standards, Medicare law, and the American health delivery system. Students will learn the components of Medicare, Medicaid, Health Insurance Organizations (HMO's), and the federal laws that govern them. (2 hr. lecture)

HIM1800

Professional Practice Experience 1 2.00 credits

This course will provide the student with a supervised professional practice experience in a healthcare setting, utilizing electronic health records and reports to manage health information data. Students will learn an in-depth knowledge of applying the minimum basic requirements for handling records imposed by regulatory agencies. Prerequisite: HIM 1000; corequisite: HIM 1110, 1000L. (6 hr. lab/clinic)

HIM2012

Legal Aspects of Health Care 2.00 credits

This course provides basic knowledge of the United States of America court system and the interconnection between the health care system and the federal government. The student will learn concepts relating to Health Insurance Portability Accountability Act (HIPAA), ethics, release of

health information, record retention, and the legalities of electronic health records. Prerequisite: ENC 1101. (2 hr. lecture)

HIM2211C

Health Information Technologies 2.00 credits

This course is designed to examine computer technology used to collect and store health information. The student will learn a variety of applications used to maintain and secure health care data. Prerequisites: HIM 1110, 1110L, and 1800. (1 hr. lecture; 2 hr. lab)

HIM2214C

Health Statistics 2.00 credits

This course will focus on the definitions for analysis, interpretation, and display of healthcare data. The student will learn the acceptable terminology and basic definitions for reporting health statistics. Emphasis is placed on the use of the formulas necessary for computing standard rates, percentages, and averages from patient data. Prerequisites: HIM 1110, 1110L; corequisite: HIM 2512C. (1 hr. lecture; 2 hr. lab)

HIM2222

ICD Coding Systems 2.00 credits

This course is designed to teach the current edition of International Classification of Diseases and Procedures codes. Students will learn code convention and format, usage of anatomy, physiology, and clinical disease processes. Pharmacology, present on admission indicators, correct code assignment and sequencing will be discussed. Prerequisites: BSC 2085, 2085L and HIM 2472; corequisite: HIM 2222L. (2 hr. lecture)

HIM2222L

ICD Coding Systems Laboratory 3.00 credits

This course is designed to apply diagnoses and operations into numerical designations (codes) utilizing the International Classification of Diseases and Procedures. Students will learn correct sequencing, analysis of clinical disease processes, diag-

nosis and procedural terminology, and application of pharmacology in current coding systems. Encoding software is utilized. Prerequisites: BSC 2085, 2085L, and HIM 2472; corequisite: HIM 2222. Laboratory fee. (6 hr. lab)

HIM2234
Advanced Coding & Reimbursement Systems
2.00 credits

This course is designed to apply the fundamentals of the Prospective Payment Systems as it applies to coding and reimbursement. The student will learn documentation criteria, validation reports of coded data, health record for compliance, and optimum reimbursement under current payment methodologies. Prerequisite: HIM 2222, 2222L; corequisite: HIM2234L. (2 hr. lecture)

HIM2234L
Advanced Coding & Reimbursement Systems Laboratory
1.00 credits

This course is designed to apply and compute Prospective Payment Systems categories. Students will learn to apply health record documentation to identify and validate correct code and payment assignments. Focus is on computation of MS-DRGs, APCs and Case-Mix Index using encoder, grouper, and electronic billing software for reimbursement. Prerequisites: HIM 2222, 2222L; corequisite: HIM 2234. (2 hr. lab)

HIM2253C
Current Procedural Terminology/ CPT-4
2.00 credits

This course provides an in-depth knowledge of coding and reporting using Current Procedural Terminology classification. Students will learn to read and interpret ambulatory health record documentation to classify and assign services and procure codes and use of encoder and grouper software. HCPCS, APCs, and RBRVS will be discussed. Prerequisites: BSC 2085, 2085L and HIM 2472. (1 hr. lecture; 2 hr. lab)

HIM2400C
Diversified Non-Hospital Health Records
2.00 credits

This course emphasizes the importance of quality record-keeping practices, data flow, and management of health information systems in a non-acute care setting. The student will learn the documentation requirements based on Federal and State statutes, accreditation standards, Medicare Conditions of Participation, payment systems, funding, Health Insurance Portability Accountability Act, and the evolution of the electronic health record. (1 hr. lecture; 2 hr. lab)

HIM2433
Pathophysiology and Pharmacology
3.00 credits

This course provides an in-depth knowledge of disease, its etiology, medical complications, and pathophysiologic nature. Students will learn laboratory and other diagnostic tests used to confirm or rule out those diagnoses addressed. Current pharmacological treatments are explored with review and interpretation of health record data. Prerequisites: BSC 2085, 2085L, HIM 2472. (3 hr. lecture)

HIM2472
Medical Terminology
3.00 credits

Analysis of medical terms through learning basic roots, prefixes and suffixes permitting the student to have a working knowledge of the language of medicine. Prerequisite: Permission of department chairperson. (3 hr. lecture)

HIM2500
Data Management & Quality Assessment
2.00 credits

The basic principles of quality assessment: quality improvement and utilization review. The accreditation process, risk management, managed care models, and the methodologies and relationships of these key areas within a health care facility are emphasized. Prerequisites: HIM 1110, 1110L; Corequisite: HIM 2500L. (2 hr. lecture)

HIM2500L
Data Management & Quality Assessment Laboratory
1.00 credits

The application of the basic principles of quality assessment: quality improvement and utilization review. The student will learn to generate models for the evaluation of different types of medical care. Activities will center on the accreditation process, managed care, and risk management. The methodologies and relationships of these key areas within a health care facility are emphasized. Prerequisites: HIM 1110, 1110L; corequisite: HIM 2500. (2 hr. lab)

HIM2512C
Supervision & Organization for Health Information Management
2.00 credits

This course will review the basic principles of management and organizational life in a health information management department and the interrelationships within the health care organization. Emphasis will be placed on the supervisory role of the health information professional, including basic motivation and communication principles essential to the practice of health information management. The student will identify and use specific motivational and communication techniques in health information supervision. Prerequisites: HIM 1110, 1110L; corequisites: HIM2500, 2500L, 2810. (1 hr. lecture; 2 hr. lab)

HIM2652C
Electronic Health Record
3.00 credits

This course reviews the current trends and preparation implementing the electronic health record and reviews documentation requirements for a variety of healthcare settings. Students will learn best practices, problem-solve associated issues, and directly participate in the transitions of electronic health records. Prerequisite: HIM 2211C. (1 hr. lecture; 2 hr. lab)

HIM2810
Professional Practice Experience 2
2.00 credits

This course is a supervised professional practice experience in a health care set-

ting utilizing health records and reports to perform medical coding functions. Students will learn to assign Medicare Severity-Diagnosis Related Groups/Ambulatory Payment Classifications using the organization's information systems, encoder and grouper software. Sequencing of International Classification of Disease (ICD) and Current Procedural Terminology (CPT) coding systems will be discussed. Prerequisite: HIM 2222; corequisite: HIM 2234, 2234L. (6 hr. lab/clinic)

HIM2820
Seminar and Professional Practice Experience 3
2.00 credits

This course is designed to provide students with structured learning experiences necessary for them to enter the health information management field. Students will learn preparation skills for the national examination by analyzing major examination topics offered in curriculum. A professional practice experience will be a component of this course. Prerequisite: HIM 2810; corequisites: HIM 2500, 2500L. (6 hr. lab/clinic)

HIM9995
Health Information Technology
26.00 credits

This course is a placeholder awarding equivalent college credit for non-collegiate training based on Technical Manual of Procedure Number 1100: 816125. This course requires special permission and students must contact the department chairperson for registration/approval. (26 Block Credits)

Health Science

HSA2532
Medical Documentation in Health Care
1.00 credit

Medical Documentation in Health Care will introduce the student to documentation in the written patient chart or electronic medical record. Through case discussions and in-class writing assignments, the student will acquire the necessary skills to document in the patient's medical record

utilizing medico-legal principles and evaluation and management criteria. Patient confidentiality, billing, and coding will also be discussed. Prerequisite: PAS 1800C, PAS 1803, PAS 1831, PAS 2936. (1 hr. lecture)

HSA3533
Medical Documentation in Health Care II
1.00 credit

Medical Documentation in Health Care II is a continuation of HSA 2532. This course will teach the student to documentation in the written patient chart or electronic medical record for special populations. Through case discussions and in-class writing assignments, the student will acquire the necessary skills to document in the patient's medical record utilizing medico-legal principles and evaluation and management criteria. Patient confidentiality, billing, and coding will also be discussed. Prerequisite: HSA 2532, PAS 1801C, 1811C, 1812, 1813, 1822L, 1823

HSC2400
Basic Emergency Care
3.00 credits

Designed to provide opportunities to develop, practice, and display skills concerning emergency care and the prevention of accidents. This course meets the American Heart Association Healthcare Provider Cardiopulmonary Resuscitation/automated External Defibrillation and the American Red Cross for Standard First Aid Certification requirement. Special fee. (3 hr. lecture)

HSC2401
Instructor's Training First Aid & CPR
3.00 credits

Designed to improve the performance skills, techniques, and knowledge as well as develop competent teaching skills in First Aid and cardiopulmonary resuscitation. This course meets the American Red Cross Instructor Certification Requirements for Standard First Aid and Personal Safety and Basic Lifesaving Cardiopulmonary Resuscitation. Special fee. Prerequisite: HSC 2400 or certification in American Red Cross Standard First Aid and Personal Safety and Basic Life Saving Cardiopulmonary

Resuscitation. Maybe repeated for credit. (2 hr. lecture; 2 hr. lab)

HSC3202
Introduction to Public Health
1.00 credit

This course is designed to give students a foundation in the core functions of population-based health consisting of assessment, policy development and assurance. Students will gain an understanding of public health as a broad field which applies the benefits of current biomedical, environmental, and behavioral knowledge in ways that maximize the health status of all populations. This course is blended. Pre-Requisite: HSA 2532, PAS 1801C, 1811C, 1812,1813, 1822L, 1823

HSC3243
Teaching Skills for Health Care
3.00 credits

This course emphasizes significant problems instructors have related to content and design of curricula or courses. Students will learn the theoretical underpinnings of teaching and learning in health science disciplines from a variety of perspectives - educational, psychological, developmental, and social. (3 hr. lecture)

HSC4942
Community Service Learning Practicum
3.00 credits

This course is designed to engage students in meaningful healthcare related community service learning activities. Students will learn to explore new collaborations in service-learning, cultural diversity and community healthcare development. These experiences will help to and prepare them for lives as civically-engaged local, national, and global citizens. Pre-Req: PAS 3019, 3042C, 3070, 3140, 3203C (3 hr. lecture)

History

AFH2000
African History and Culture
3.00 credits

Historical survey of the development of African society, its culture and institutions,

with emphasis on the 13th century to the present. (3 hr. lecture)

AMH2010
History of the US to 1877
3.00 credits

Students will learn of the history of the United States to 1877 by examining the founding, growth, and development of America from the colonial era through Reconstruction. (3 hr. lecture)

AMH2020
History of the US since 1877
3.00 credits

This course focuses on the social, economic, cultural, and political developments in the United States since 1877. The student will gain knowledge of changes and continuities in the history of the United States since the late nineteenth century. (3 hr. lecture)

AMH2035
Recent American History Since 1945
3.00 credits

The internal development of the United States and the role of the U.S. in world affairs since World War II. (3 hr. lecture)

AMH2047
U.S. Military History
3.00 credits

This course surveys the culture and history of U.S. military affairs from the colonial origins of the American nation to the present. The course also emphasizes how warfare, military strategy, and technological development on the battlefield has continued to evolve throughout at 20th Century and beyond. (3 hr. lecture)

AMH2070
Florida History
3.00 credits

Florida from the Spanish period to the present with emphasis on the modern development of natural resources, urbanization, industry, culture and tourism. (3 hr. lecture)

AMH2079
History of South Florida
3.00 credits

A study of the history of South Florida (Lake Okeechobee south to Key West)

including geological foundations exploration, settlement and contemporary cultural trends. (3 hr. lecture)

AMH2091
Afro-American History
3.00 credits

A survey, including the African background, of the Afro-American in the United States history, with emphasis on their economic, political and cultural development. (3 hr. lecture)

EUH2032
History of the Holocaust
3.00 credits

This is a foundation course in Holocaust Studies. Students will learn the historical origins, execution and consequences of the Holocaust. This course also examines the Holocaust's place in context of genocides past and present. (3 hr. lecture)

EUH2068
History of Russia from 1917
3.00 credits

The student will learn the origins and outcomes of the Russian Revolutions of 1917, and the founding, growth, and development of the Soviet State through the disintegration of the U.S.S.R. Students will also learn of recent developments in Russia since the 1990s. (3 hr. lecture)

LAH2021
Colonial Latin America
3.00 credits

This course covers the history of Latin America, from the pre-Columbian civilizations of the region, to the Wars of Independence. Students will learn about the development of the political, social, economic and cultural structures of colonial Latin America to 1825. (3-hour lecture)

LAH2023
History of the Caribbean
3.00 credits

This course introduces students to the economic social, political, and cultural history of the Caribbean and its peoples. Students will learn of the changes and continuities that have affected Caribbean development. (3 hr. lecture)

LAH2025
History of Cuba
3.00 credits

Historical analysis of the development of Cuban society, its culture and institutions. (3 hr. lecture)

WOH2003
History of Genocide
3.00 credits

This course is designed to explore the history, causes, and consequences of genocide through identification of the patterns of intentional mass killings. Students will learn via case studies the characteristics of past and current incidents characterized as genocide. (3 hr. lecture)

WOH2012
History of World Civilization to 1789
3.00 credits

This course covers the history of World Civilizations from the prehistoric period to the 18th century. Students will learn the major political, social, economic, and cultural structures of civilizations and their development through 1789. (3 hr. lecture)

WOH2022
History of World Civilization from 1789
3.00 credits

The student will examine the historical development of world civilizations since 1789. Students will learn of historical processes and developments in social, cultural, political, and economic contexts since the 18th century. (3 hr. lecture)

Hospitality Management

HFB2990
CBE Food and Beverage Specialist
1.00 – 12.00 credits

The Competency-Based Education course HFB 2990 - Food and Beverage specialist course is designed to assess learner mastery of the competencies and skills necessary for a successful career in the food and beverage industry. The competency-based approach allows learner the flexibility to self-direct their learning experience. As a

result, the learning is much more individualized and can be significantly accelerated. Learners enrolled HFB 2990 CBE Food and Beverage also will have the opportunity to achieve industry-recognized academic credentials, and will be prepared for positions such as restaurant server, room service attendant or banquet set-up staff.

HFT1000
Introduction to Hospitality
3.00 credits

In this introductory course the student will learn a basic understanding of the lodging, travel, meeting planning, club management, food and beverage, gaming and cruise industry by tracing the industry's growth and development, reviewing the organization of hospitality operations, and by focusing on industry opportunities and future trends. Career opportunities, interview and resume writing skills are discussed. (3 hr. lecture)

HFT1210
Human Resources
3.00 credits

Provides information relating to the recruitment and selection of new staff, the handling of difficult employees, motivating employees and conducting performance evaluations. (3 hr. lecture)

HFT1212
Safety and Sanitation
3.00 credits

Students will learn industry standards on sanitation as it relates to food preparation and kitchen operations. Students will recognize proper sanitation techniques and explain how to implement sanitation programs in food service operations. (3 hr. lecture)

HFT1220
Supervisory Development
3.00 credits

This introductory course will assist students in learning basic supervisory skills. The students will learn how to conduct proper employee evaluations, as well as how to apply discipline. Effective communication techniques, use of delegation and diversity in the workforce are dis-

cussed. Issues concerning employee relations and current topics in management are addressed. (3 hr. lecture)

HFT1300
Executive Housekeeping
3.00 credits

In this introductory course the student will learn the fundamentals of housekeeping management. This course describes the management functions, tools and practices required in today's lodging and institutional housekeeping departments. Special attention to environmental, and safety implementations. Design and architectural elements and their relation to housekeeping will be discussed. (3 hr. lecture)

HFT1841
Dining Room Service
3.00 credits

Provides students with the opportunity to acquire knowledge of advanced service techniques, including guest satisfaction, food, wine and beverage serving, types of menus, table service techniques, table-side cooking, napkin folding, table setting, safety, sanitation, emergency procedures, restaurant technology, and service styles. Students will gain experience in cash and non-cash handling, forecasting sales, and merchandising techniques. Corequisite: HFT 1000. (3 hr. lecture)

HFT1852
Menu and Facilities Planning
3.00 credits

This course is a study of the factors involved in planning effective menus for a variety of food service operations. Students will learn to develop a firm working knowledge of menu-writing techniques and participate in actual menu design and facilities layout of a food service establishment. Prerequisites: HFT1000 (3 hr. lecture)

HFT2223
Training Skills and Development
3.00 credits

In this intermediary course the student will learn effective training processes. The course considers the assessment and analysis of training needs, the systematic design of instruction, the evaluation

of training programs, and management of the training programs, and functions. The student will have the necessary skills in order to develop and conduct training sessions. (3 hr. lecture)

HFT2241
Leadership and Quality Assurance Management
3.00 credits

Provides an analysis of management issues related to the "personal touch" in customer service and quality assurance in the hospitality industry. Emphasis is placed on the importance of contemporary management and business practices to keep up with the demands of an ever-changing industry. (3 hr. lecture)

HFT2261
Restaurant Management
3.00 credits

Familiarizes students with the general principles of food production management, work scheduling, and preparation supervision. Emphasis is placed on purchasing and financing, planning and equipping a kitchen, pricing and menu design, and marketing and promoting restaurants. Prerequisite: HFT 1000. (3 hr. lecture)

HFT2410
Front Office Procedures and Lodging Operations
4.00 credits

In this intermediary course the student will learn about various positions in the rooms division. Focus in hotel front office procedures involved in reservations, registering and checking out guests. Guest services, revenue management, accounting procedures and the operation of a PMS (Property Management System) are discussed. Special attention to hotel operations including security, housekeeping and engineering. (3 hr. lecture; 2 hr. lab)

HFT2421
Managerial Accounting for Hospitality
3.00 credits

Presents managerial accounting concepts and explains how they apply to specific

operations within the hospitality industry. (3 hr. lecture)

HFT2449
E-Business for the Hospitality Industry
3.00 credits

Prepares student to manage information systems within their organizations. Emphasis is on selecting the right computer systems technology and maximizing available technology in order to promote and sell services. Introduces the use of automation in the broad hospitality sector and exams technological applications ranging from distribution systems (GDS, CRS and Web based), Property Management Systems, and EPOS systems to developments in telecommunications, and assesses their effect on the tourism sector. While a broad interpretation of both technology and tourism will be used, particular emphasis will be placed on the hospitality sector (i.e. Hotels and catering) and on distribution technology. A combination of lecture, case studies, seminars, visiting lecture and lab sessions are used. Prerequisite: HFT 1000. (3 hr. lecture)

HFT2500
Marketing of Hospitality Services
3.00 credits

In this intermediary course the students will learn basic knowledge and practical experience which will enable them to develop strategic marketing plans for any hospitality business. Special focus on the marketing mix as it applies to hospitality. Marketing trends and case studies are discussed. (3 hr. lecture)

HFT2501
Hospitality Sales
3.00 credits

In this intermediary course the student will learn sales presentation skills and the importance of sales in an organization. Topics discussed are the organization of the sales department including the responsibilities of all involved in the sales process. . Emphasis on sales presentations, looking for leads, negotiating skills, building rapport, and closing the sale. Role playing and

other activities will be used to enhance learning. (3 hr. lecture)

HFT2750
Event and Meeting Management
3.00 credits

In this intermediary course the student will learn the complete set of skills necessary to adequately perform as an event planner, hotel banquet manager and convention and meeting planner. Actual events will be used to reinforce the general rules of table service, booking functions, staffing banquets/conventions, and responsibilities of a host venue as they apply to buffets and banquets. Prepares students in trade show administration, meeting management, and legal issues associated with banquets and conventions. (3 hr. lecture)

HFT2772
Introduction to Cruise Line Industry
3.00 credits

Provides students with an introduction to the cruise line industry, its evolution and relationship to other segments of tourism and hospitality, sales and marketing methods, management, and strategic planning are major topics. Corequisite: HFT 1000. (3 hr. lecture)

HFT2773
Cruise Line Sales and Marketing
3.00 credits

Provides an introduction to the sales and marketing functions of the cruise industry. Students will gain an understanding of how cruises lines position themselves in the competitive business environment and the sales and marketing techniques used to attract customers and group business. Students will gain an understanding of yield management and the issues surrounding travel agents during the sales process. Prerequisites: HFT 2772. (3 hr. lecture)

HFT2774
Shipboard Operations
3.00 credits

Provides an understanding of shipboard operations on cruise ship and their relationship to the shore side headquarter office. Students will gain knowledge of the

history of cruise ships and the activities and facilities that make cruise line operations complementary both to the industry and the guest. This course will focus on the ship as a hotel for passengers with the winning and dining aspects of service, as well as, casino practices on board. Prerequisite: HFT 2775. (3 hr. lecture)

HFT2775
Shore side Operations
3.00 credits

Provides a basic understanding of the shore side office operations and sales procedures of cruise line and how they relate to the general operations of the cruise ship itself. Students will acquire knowledge of pier, airport, ground services and hotel operations and create elements for cruise lines sales. Prerequisite: HFT 2772. (3 hr. lecture)

HFT2800
Food and Beverage Management
3.00 credits

Provides a basic understanding of the principles of food production and service management, menu planning, serving, purchasing, labor, food/bar service and costs, storage, beverage management, sales promotions, entertainment, and liability laws. (3 hr. lecture)

HFT3263
Restaurant Management
3.00 credits

This course prepares the student with analysis of principal operating problems facing managers in the restaurant industry. Various control systems necessary for profitability and quality are examined. Hands on Training opportunities on our Wolfson Campus food service establishments Bistro @ Tuyo and TUYO Restaurant.

HFT3603
Hospitality Law
3.00 credits

This course prepares the student with the legal aspects of the hotel, food and travel industry. Students will study the court system and basic legal principles governing the hospitality industry, with specific attention to hospitality business structures, innkeeper-guest relationships and the duty

owed to each other; and emerging areas of concern in contracts, torts, civil and property rights law, and insurable risks.

HFT4064

Bar and Beverage Management

3.00 credits

This course prepares the student to manage the bar and beverage option of a restaurant, bar, hotel, country club, any place that serves beverages to customers. It provides students with the history of the beverage industry and showcases the appreciation of wine, beer, and spirits. Students will obtain the knowledge necessary to successfully equip, staff, manage, and market a bar and beverage establishment.

HFT4253

Hotel Management

3.00 credits

This course provides the student an advanced focus on the hotel industry. The course examines modern-day and futuristic trends, career opportunities, and recent innovations in the hotel industry from a management perspective. Specific emphasis will be placed on the role of the general manager, as well as the varied roles of departmental managers within the hotel and lodging industry. Topics include operations, department organization and management, benchmarking, quality control, guest service management, and financial controls of hotels.

HFT4468

Revenue Management in the Hospitality Industry

3.00 credits

This course prepares the student with revenue management practices in the hotel industry, which include capacity management, demand and revenue forecasting, discounting, overselling, displacement, rate management. How to apply pricing and length-of-stay tools and how to measure revenue management performance. Management from a focus on occupancy and average room rate to a focus on revenue per available room (RevPAR). This course prepares students to accurately forecast guest arrivals at hotels, examine

pricing models in accordance with revenue management principles, and to manage overbooking. Prerequisite: ACG 2021, ACG 2021L or HFT 2421

HFT4809

Food Service Management

3.00 credits

This course prepares the student with the theoretical, organizational and operational skills necessary to understand, synthesize and put into action the management philosophies and procedures of the food-service industry. Students will learn key concepts of creating, developing, managing, and running a foodservice business, from concept to operation.

HRM2990

CBE Rooms Division Specialist

1.00 – 13.00 credits

The Competency Based Education HRM 2990 - Rooms Division Specialist course is designed to assess learner mastery of the competencies and skills necessary for a successful career in the lodging industry. The competency-based approach allows learner the flexibility to self-direct their learning experience. As a result, the learning is much more individualized and can be significantly accelerated. Learners enrolled in the HRM 2990 CBE Rooms Division course also will have the opportunity to achieve industry-recognized academic credentials, and will be prepared for positions such as front desk agent, guest relations agent or reservation clerk.

Human Services

HUS1001

Introduction to Human Services

3.00 credits

An introduction to an overview of the field of Human Services, including the role of the human services worker as it relates to various agencies, counseling, interviewing and managing. (3 hr. lecture)

HUS1302

Basic Counseling Skills

3.00 credits

Development of the skills of observation, recording, reporting, interviewing and counseling. These skills are presented in the context of general counseling theory. (3 hr. lecture)

HUS1318

Domestic Abuse and Family Violence

3.00 credits

This course is designed to educate human services workers for the evaluation, counseling and outreach skills necessary for working with victims of domestic violence. The dynamics of partner violence, child abuse, and elder abuse will all be explored. (3 hr. lecture)

HUS1421

Assessment and Treatment Planning in Addictions

3.00 credits

This course is designed to familiarize students with the core functions of Assessment and Treatment Planning for the chemically dependent client. Emphasis on treatment planning will be accomplished drawing from the Florida Certification Board for addiction professionals and the Department of Children's and Family Services guidelines. Prerequisites: HUS 2493, PSB 2442. (3 hr. lecture)

HUS1423

Group Counseling in Substance Abuse

3.00 credits

This course stresses development of effective group counseling leadership skills including organizing, implementing, and evaluating group counseling programs. The course includes actual group experiences. Prerequisite: PSB 2442. (3 hr. lecture)

HUS1428

Addiction Treatment Delivery Systems

3.00 credits

This course is designed to survey the modalities of addiction treatment. The course will study federal and state systems as well as private-not-for-profit and private-for-profit programs. All of these

will be described using examples drawn from local agencies, the diverse populations they serve, and the politics and economics of the systems. This course will also present a critical exploration of the history and theory defining problems of addiction treatment and the characteristics and career issues of an addiction treatment services worker. (3 hr. lecture)

HUS1440

Family Issues in Chemical Dependency

3.00 credits

This course is designed to analyze the effects of chemical abuse on the family system. Emphasis will be placed on family roles and dynamics; characteristics of children (including adult children) of chemical abusers; theories of co-dependence; and adaptations made individually and socially by family members. Critical issues and strategies in family treatment will be explored. (3 hr. lecture)

HUS1475

Addiction Counseling and the law

3.00 credits

This course is designed to introduce addiction counseling students to the vocabulary, agencies and processes required to work with clients involved in both the criminal and civil justice systems. This course focuses on the relationship between the law and Human Services institutions, patterns of law-making and law-breaking, the legal structures and processes, and law as an instrument of public policy, social control and social change. The roles and functions of police, courts and correctional services will be surveyed. Common civil issues that affect clients in recovery will be explored. In addition, this course will enable students to explain the legal basis for alcohol and other drug services in Florida. State statutes pertaining to alcohol and drugs and their administrative rules will be reviewed. Confidentiality requirements, compliance standards, and professional ethics will be presented. Prerequisite: PSB 2442. (3 hr. lecture)

HUS1480

HIV/AIDS and the Substance Abuser

3.00 credits

This course is designed to educate prospective addiction counselors for the evaluation, counseling and outreach skills necessary for working with HIV disease and AIDS. The course will explore not only how this disease affects one personally, but also how this pandemic has affected many psychosocial aspects of society. (3 hr. lecture)

HUS2303

Counseling Techniques

3.00 credits

Specific counseling techniques are introduced within the various counseling theories. Work involves both group and individual techniques. (3 hr. lecture)

HUS2493

Addiction Counseling Competencies

3.00 credits

This course is designed to enable students to master the TAP 21 competencies clinical evaluation, treatment planning, referral, service coordination, counseling, client, family, and community education, documentation and professional and ethical responsibilities. Additionally, the course will teach the student the process of identifying problems, establishing goals and deciding on a client treatment plan. Students will learn how to respond to an individual's needs during acute emotional and physical distress. Prerequisite: PSB 2442 (3 hr. lecture)

HUS2500

Issues & Ethics in Human Services

3.00 credits

This course is designed to familiarize students with the ethical problems that emerge from counseling the chemically dependent client. Emphasis will be placed on the following: the history and theory of ethics in health care; professionals' and patients' rights and responsibilities; the relationship between ethics and law; confidentiality and truth-telling in clinical relationships; technology; diagnostic testing and treatment; treatment of terminal illness; distribution of scarce medical resources and access to health care and systems payment. Prerequisite: PSB 2442. (3 hr. lecture)

HUS2820

Field Experience in Human Service

3.00 credits

Volunteer work as counseling paraprofessionals in a community agency under supervision. Students meet regularly with the Field Coordinator. Prerequisites: HUS 1001, 1302, 2303. (144 hrs. Field Experience)

HUS2902

Directed Independent Study In Addiction Treatment

3.00 credits

This course is designed to allow students to pursue projects under faculty advisement and supervision. Projects may be directed research, or development of skills and competencies. The proposed project must demonstrate competency in one of the core competencies of addiction counseling learned in HUS2493 and must be approved by the supervising instructor. Prerequisites: HUS 2493, PSB 2442. (3 hr. lecture)

HUS2941

Human Services Addiction Counseling Practicum

6.00 credits

This course is designed to provide the student with an arena to practice the application of Human Services addiction counseling theories and techniques in a licensed addiction treatment facility. Prerequisites: HUS 1302, 1421, 1423, 2493, 2500 and PSB 2442. (6 hr. lecture)

Humanities

HUM1020

Humanities

3.00 credits

An integral approach to the humanities: creative ideas, works, and accomplishments of various cultures from the areas of art, architecture, drama, music, literature and philosophy are presented. (3 hr. lecture)

HUM2513

Arts and Humanities

3.00 credits

Selected examples of Art including painting, sculpture, architecture, literature and the performing arts to illustrate the variety of art in relation to man's perception of

self, nature and God. Intended primarily for use in overseas academic programs. May be repeated for credit. (6 hr. lab)

Interdisciplinary Honors

IDH1001 **Honors Leadership Seminar 1** **1.00 - 3.00 credits**

Rigorous, in-depth exploration of selected honors topics. The topic and content are arranged by the instructor, department chairperson and campus honordirectors. These seminars will consist of small groups that meet on a regular basis and be offered in any subject area. (1-3 hr. lecture)

IDH1002 **Honors Leadership Seminar 2** **1.00 - 3.00 credits**

Rigorous, in-depth exploration of selected honors topics. The topic and content are arranged by the instructor, department chairperson and campus honors coordinators. These seminars will consist of small groups that meet on a regular basis and be offered in any subject area. (1-3 hr. lecture)

IDH2003 **Honors Leadership Seminar 3** **1.00 - 3.00 credits**

Hours taken by students to complete a capstone (thesis) project under the supervision of an advisor and a committee, which will produce a piece of work that students may take with them to upper division institution to demonstrate their ability to apply the principles learned and the quality of their work. (1-3 hr. lecture)

IDH2004 **Honors Leadership Seminar 4** **1.00 - 3.00 credits**

Rigorous, in-depth exploration of selected honors topics. The topic and content are arranged by the instructor, department chairperson and campus honors coordinators. These seminars will consist of small groups that meet on a regular basis and be offered in any subject area. (1-3 hr. lecture)

Interdisciplinary Sciences

ISC4534C **Research in the Sciences** **3.00 credits**

The student will develop a rich understanding of the processes of science through the development of a hands-on original scientific investigation in life, physical, and/or earth/space sciences. The student will generate hypothesis, develop an experimental design, collect data, and present an analysis of their findings. Special fee. (3 hr. lecture)

Interdisciplinary Studies

IDS1044 **Leadership Seminar** **3.00 credits**

The student will develop critical thinking, team-building, leadership, and civic literacy in order to build leadership capacity and professional potential. Students will learn strategies and skills that are transferable to academic, personal, and professional endeavors. Service-learning may be included. Students will submit an end-of-term portfolio. (3 hr. lecture)

IDS1107 **Tools for Success** **1.00 credits**

This course is for students majoring in science, technology, engineering and mathematics fields (STEM). Students will learn writing, research, presentation, and technological skills necessary for success in STEM-related disciplines. Course topics include learning styles, collaborative skills, power study techniques and will use related technologies related to STEM. (1 hr. lecture)

IDS1153 **Earth Literacy and Sustainability 1** **3.00 credits**

This interdisciplinary course is designed to help students explore Earth Literacy and environmental sustainability. Students

will learn principles of Earth Literacy and ecological sustainability, identify current issues in Earth ethics, and demonstrate an understanding of individual responsibility in contributing to a sustainable world through lectures, presentations, projects, guest presenters, and field experiences. (3 hr. lecture)

IDS2123 **Leadership in Science, Technology, Engineering and Mathematics** **1.00 credits**

In this course students will research their career interests and interview professionals in Science, Technology, Engineering and Mathematics (STEM). Students will learn to identify, compare, and evaluate upper division degree programs and prepare applications for admission to these programs. Students will write successful application essays and develop interview skills for transfer. (1 hr. lecture)

IDS2124 **Skills for Transfer Success** **1.00 credits**

This course is for students in science, technology, engineering and mathematics (STEM) for matriculation to the upper division. Students will learn to research, write, coordinate and present grants and scholarships in conjunction with the college application process. Students will document all of their efforts in an electronic portfolio. (1 hr. lecture)

IDS2930 **The Economic Effects of Scientific Discovery** **1.00 credits**

Students will develop an understanding of the relationship between scientific discovery and/or development and its impact on a country's economic growth. Students will participate in a series of seminar sessions on campus, and will be assigned selected readings which reflect the course purpose. In a cooperative learning mode, students from Business will gain an understanding of scientific developments, while students from Natural Science will realize the economic value of scientific research. The capstone of the course is a trip to London

and Paris to experience firsthand this relationship. (1 hr. lecture)

Interior Design

IND1020 **Interior Design 1** **4.00 credits**

Student's projects develop the ability to plan simple interior floor plans and elevations. Corequisite: ARC 1115. Laboratory fee. (2 hr. lecture; 4 hr. lab)

IND1100 **History of Interiors 1** **3.00 credits**

Acquaints the student with period styles in room decoration from Egyptian through the Renaissance. (3 hr. lecture)

IND1130 **History of Interiors 2** **3.00 credits**

Historical development of interior design from the Renaissance through the 20th century. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

IND1200 **Interior Design 2** **4.00 credits**

Problems in room planning, correlation of color schemes and furnishings. Prerequisite: IND 1020. Laboratory fee. (2 hr. lecture; 4 hr. lab)

IND1300 **Interior Design Presentations 1** **2.00 credits**

An introductory course in the use of various media for presentation of plans, schemes, and interior perspective renderings. Prerequisite: IND 1020; corequisite: IND 1200. Laboratory fee. (1 hr. lecture; 2 hr. lab)

IND2201 **Design Principles for Kitchen & Bath** **3.00 credits**

A specialized design course for kitchen and baths. Students will learn the basic elements and principles of creating spaces for clients, blending architectural styles, colors and themes with function and purpose.

Prerequisite: ARC2461, IND1200, IND1300. Laboratory fee (3 hr. lecture)

IND2210 **Interior Design 3** **4.00 credits**

Projects provide practice in planning traditional and contemporary interiors including working drawings and specifications. Prerequisite: IND 1200; corequisite: IND 2330. Laboratory fee. (2 hr. lecture; 4 hr. lab)

IND2220 **Interior Design 4** **4.00 credits**

Advanced problems involving interior arrangements in residential and commercial areas. Prerequisite: IND 2210. Laboratory fee. (2 hr. lecture; 4 hr. lab)

IND2330 **Interior Design Presentations 2** **3.00 credits**

Emphasis is on perfecting water color, casein and reproducible drawing techniques through the presentation of interior plans, elevations and perspectives. Projects also provide experience in assembling collages. Prerequisite: IND 1300; corequisite: IND 2210. Laboratory fee. (1 hr. lecture; 4 hr. lab)

IND2421 **Introduction to Furniture Design** **3.00 credits**

Hands-on course dealing with the theoretical and practical considerations for designing and building furniture and cabinetry. Students will learn basic principles of designing furniture through researching history, theory, materials, methods and design considerations associated with the construction of furniture. Prerequisite: IND1200, ARC1302. Laboratory fee. (3 hr. lecture)

IND2430 **Lighting Design** **3.00 credits**

A survey of utilitarian interior lighting and exterior architectural lighting including fundamentals and basic physics laws, practical applications to interior and exterior spaces and lighting design considering dif-

ferent levels of space utilization and fixture efficiency. Prerequisite: IND 1200. Special fee. (3 hr. lecture)

IND2500 **Professional Practices** **3.00 credits**

Duties and responsibilities relative to employment and business practices. Prerequisite: Sophomore standing level or equivalent. (3 hr. lecture)

IND2608 **Sustainable Design** **3.00 credits**

Introduction to basic theories and practices of ecological design in interiors. Students will learn to take responsibility for their work by understanding the impact their designs have on our environment, and ways to mitigate this impact by gaining a practical understanding of the field of sustainable design. Prerequisite: ARC1126, IND1200, IND1300; Corequisite: ARC2461. Laboratory fee (3 hr. lecture)

Italian Language

ITA1000 **Elementary Italian Conversation** **3.00 credits**

A course emphasizing conversational Italian. Extensive use is made of oral exercises and audio tapes. This course cannot be substituted for ITA 1120 or 1121. (3 hr. lecture)

ITA1120 **Elementary Italian 1** **4.00 credits**

An integrated (multi-media) approach to acquire proficiency in the basic skills (of the language)-listening/understanding, speaking, reading, writing, and cross-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice in class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

ITA1121 **Elementary Italian 2**

4.00 credits

A continuation of 1120. A proficiency-oriented course emphasizing the mastery of the basic skills of the language. Prerequisite: ITA 1120. (4 hr. lecture)

ITA2220 **Intermediate Italian 1**

4.00 credits

Students will understand, speak, read, write, and gain cultural awareness of Italian through a systematic review (using an integrated, multimedia approach) of reading, grammar, and writing skills with emphasis on oral and written communication. Prerequisite: ITA 1121 or equivalent. (4 hr. lecture)

ITA2221 **Intermediate Italian 2**

4.00 credits

This is a continuation of Intermediate Italian 1. Students will learn to understand, speak, read, and write Italian. Students will also learn to develop cross-cultural awareness through a systematic review of reading and writing skills with emphasis on oral as well as written expression. Prerequisite: ITA 2220 or equivalent. (4 hr. lecture)

ITA2240 **Intermediate Italian Conversation 1**

3.00 credits

Training in the acquisition and application of language skills. Practical use of the language to develop fluency and correctness in speaking. Pre/corequisite: ITA 2221 or equivalent. (3 hr. lecture)

ITA2241 **Intermediate Italian Conversation 2**

3.00 credits

Practice in listening and speaking using topical materials. Development of oral proficiency skills. Prerequisites: ITA 2221 or 2240. (3 hr. lecture)

Japanese Language

JPN1120 **Elementary Japanese 1**

4.00 credits

An integrated (multi-media) approach to acquire basic language skills: listening/understanding, speaking, reading, writing, and cross-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice in class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

JPN1121 **Elementary Japanese 2**

4.00 credits

A continuation of JPN 1120. A proficiency oriented course emphasizing the mastery of the basic skills of the language. Prerequisite: JPN 1120. (4 hr. Lecture)

JPN2220 **Intermediate Japanese 1**

4.00 credits

Students will understand, speak, read, write, and gain cultural awareness of Japanese through a systematic review (using an integrated, multimedia approach) of reading, grammar, and writing skills with emphasis on oral and written communication. Prerequisite: JPN 1121 or equivalent. (4 hr. lecture)

JPN2221 **Intermediate Japanese 2**

4.00 credits

This is a continuation of Intermediate Japanese 1. Students will learn to understand, speak, read, and write Japanese. Students will also learn to develop cross-cultural awareness through a systematic review of reading and writing skills with emphasis on oral as well as written expression. Prerequisite: JPN 2220 or equivalent. (4 hr. lecture)

Journalism

JOU1100 **Basic Reporting**

3.00 credits

Journalistic writing emphasizing the elements of reporting with an emphasis on

the modern news story, analysis of the elements of news, style structure of news stories, news sources, and the mechanics of newspaper production. (3 hr. lecture)

JOU1946 **Journalism Internship**

1.00 - 3.00 credits

Qualified students will receive practical experience working with local or college communications media under the supervision of professional media specialists and the journalism faculty. Prerequisite: JOU 1100 and permission of department faculty. May be repeated for credit. Not automatically transferable. (2-6 hr. lab)

JOU1949 **Co-op Work Experience 1: JOU**

3.00 credits

This course is designed to provide training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3hr. lecture)

JOU2200 **Editing and Makeup**

3.00 credits

The application of copy desk techniques, including evaluating and editing copy, correcting faulty news stories, handling wire copy, writing headlines, and designing page layouts. Prerequisite: JOU 1100. (3 hr. lecture)

Library Science

LIS1001 **Library Research**

1.00 - 3.00 credits

Provides students with a practical working knowledge of the Library so that resources may be used efficiently for research purposes. Emphasis is placed on developing effective and efficient methods of using

the card catalog, the online catalog and databases, periodical indexes, CD-ROMS, general reference books and other library research technology. (1-3 hr. lecture/lab)

LIS2004
Strategies for Online Research
1.00 credits

LIS 2004, Strategies for Online Research, focuses on critical thinking skills for online research. Students will learn how to access, evaluate, and use information efficiently and ethically. (1 hr. lecture).

Linguistics

LIN 2011
Introduction to Linguistics
3.00 credits

The course provides an exploration of basic linguistic concepts including phonology, morphology, syntax, pragmatics and semantics, how a language is organized and functions, and will establish a connection between Linguistics and Translation Theory. The course will also introduce students to the study of how cultural and social factors affect human communication. (3 hr. lecture)

LIN2200
Phonetics
3.00 credits

An introduction to the elementary area of the sound systems of types of spoken English. Practice in recognition and transcription using IPA alphabet. (3 hr. lecture)

Management

FIN3400
Finance for Non-Financial Managers
3.00 credits

The students will learn to apply their financial skills and decision-making abilities to address financial issues in a business environment. They will learn how financial markets influence their decisions and the role of financial intermediaries in these markets. Emphasis will be placed on financial and capital budgeting, working capital management, short and long term financing, valuation of the firm, and overall

capital structure. The course will require the student to apply the time value of money through the use of present and future value scenarios. Must pass course with a grade of "C" or higher. (3 hr. lecture)

FIN3403
Financial Management
3.00 credits

Students will learn the sources and uses of funds as they relate to financial decision making in the corporate form of enterprise. Emphasis is placed on working capital management, capital budgeting techniques, short and long term financing, and capital structure and the value of the firm. This course emphasizes the use of formulas and spreadsheets through Excel. Prerequisites: ACG 2071, 2071L, CGS 1060, QMB 2100 and 2100L. (3 hr. lecture)

ISM4011
Management Information Systems
3.00 credits

The student will use information technology software to assist in making decisions of a business nature. The course will examine the use of computer systems and information technology and their applications to make more effective business decisions. The course will include the latest terminology, techniques and applications of information systems in a business organization. Pre-requisites: CGS1060, Senior status or permission by department chair. Must pass course with a grade of "C" or higher. (4 hr. lecture)

MAN1023
Management for Non-Profit Organization
3.00 credits

This is a foundation course in the management of non-profit organizations. This course provides an overview of the range and variety of institutions and activities of the non-profit sector and the critical role they play. The student will learn what non-profits have in common and the basic rationale for this type of organization through clarifying the basic scope, structure, and role of the organizations of the non-profit sector. An emphasis will be placed upon the need for non-profit organizations to

operate similarly to for-profit businesses be efficiently managing financial resources, developing new revenue sources, adapting to change and effectively evaluating their community impact. (3hr. lecture)

MAN1949
Management Internship 1
3.00 credits

Students will learn to develop practical knowledge and skills in the application of theory to actual problems in a non-classroom setting in a student's field of study. (144 hr. Internship)

MAN2021
Principles of Management
3.00 credits

The student will learn to analyze the major functions of management. Emphasis is placed on learning how to manage organizations for excellence in both performance and employee satisfaction. Major topics include but are not limited to business ethics and social responsibility, strategic and operational planning, decision making, organization structure and behavior, managing groups and teams, communication and information technology. Special fee. (3 hr. lecture)

MAN2300
Human Resources Management
3.00 credits

Reviews how the personnel/human resources department contributes to overall planning and profitability of an organization. Major topics include typical personnel functions: recruitment and selection, training, performance appraisal, job analysis, and compensation and benefits administration. Class discussions will focus on changing value systems in the work force and the resulting challenges for managers. (3 hr. lecture)

MAN2604
Managing in a Multi-Cultural Environment
3.00 credits

This course will introduce opportunities and problems encountered by managers operating in a diverse environment either within or outside their home country's borders. Discussions will cover the environment of multinational management as

well as planning, organizing, staffing, leading and controlling in both domestic and multinational companies. Current events and cultural issues that significantly affect international business will also be examined. (3 hr. lecture)

MAN2920
Management Internship 2
3.00 credits

Students will learn to enhance the practical experience gained in MAN 1949 to put into practice the knowledge and skills in the application of theory to actual problems in a non-classroom setting. Prerequisite: MAN1949. (144 hr. Internship)

MAN2930
Creative Leadership
3.00 credits

Students will experience and analyze the dynamics of group behavior in establishing a creative work climate where managers and employees can perform more effectively. Topics to be examined include team building, the importance of trust in professional relations, giving and receiving feedback, the functions of sub-groups, roles and status, appointed power, elected power, informal power, and formal power. The class is conducted entirely in a discussion group setting. (3 hr. lecture)

MAN3025
Organization Management
3.00 credits

The student will learn the major functions of supervision and management including the functions of planning, organizing, leading and controlling. Emphasis is placed on learning how to communicate more effectively with employees and how to increase leadership effectiveness. Major topics include goal setting and attainment, organizational structure, decision-making, strategic planning, managing stress, and ethical behavior and ethical role modeling. Cases that present the student with opportunities to make supervisory and management decisions, along with timely feedback on their effectiveness, will be used. Must pass this course with a grade of C or higher. (3 hr. lecture)

MAN3065
Business Ethics
3.00 credits

In this course the student will learn how personal values and ethics influence the decision-making capacity of the manager within an organization. The student will learn about ethical theories and the roles they play in the social and corporate behavior of an organization. Issues such as diversity in the workplace, intuition, technology, and the global environment of business, will be included in case examples. The student will acquire an understanding of how an organization can institutionalize its ethical system. (3 hr. Lecture)

MAN3240
Organizational Behavior
3.00 credits

The Students will learn about social behavioral sciences that can be applied to supervision and management through major topics include motivation, conflict, corrective actions and rewards, job related stress, organizational dynamics, the evolving global environment, and the responsibility to stakeholders and the planetary environment. The student will examine organizational behavior and how to integrate behavioral concepts in an effective managerial decision-making process. Must pass course with a grade of "C" or higher. (3 hr. lecture)

MAN3301
Human Resource Management
3.00 credits

The student will learn the functions of Human Resource Management including human resource planning, strategic development of human resources, recruitment techniques, selection and hiring processes, compensation systems, development of policy and procedures for effective and ethical human resource management, performance review and evaluation systems, working effectively with organized labor, retention of employees, and current issues in human resource management. The course will also include an exploration of human resources within the global business environment of a boundless organization. (3 hr. lecture)

MAN3322
Human Resources Information Systems
3.00 credits

This course examines the role of human resources information system (HRIS) in today's organizations and human resources departments. The student will address topics such as human resource information systems design, acquisition, and implementation. The role of these systems in talent acquisition and management is also examined. Prerequisite: MAN3025, MAN3301.

MAN3504
Production Operations and Logistics Management
3.00 credits

This course examines the integration of production operations and logistics management and how they enable an organization to compete successfully in business. Students will learn the relationships that exist between operations and the supply chain, including operations and supply chain strategies, business processes, project management, product design and development, and inventory management. This course uses case study methodology. Prerequisites: MAN 2021 and TRA 1154. (3 hr. lecture)

MAN3506
Operations Management
3.00 credits

The course emphasizes the application of operational decision-making techniques to improve process, productivity, and the effective utilization of resources within organizations. Students will learn to recognize the trade-offs associated with operations management decisions and their effect on resource allocation. Topics include production processes, operations strategies, quantitative techniques, quality, performance, capacity planning, efficiency, forecasting, resource management, statistical process control, project management, and supply chains. Prerequisites: MAN 2021, QMB 2100 and TRA 3132. (3 hr. lecture)

MAN3554
Safety and Risk Management
1.00 credits

This course will focus on safety and risk management with emphasis on how it applies to supply chain management. Students will learn the processes used to characterize and manage risk, as well as maintain a safe operating environment with the protection of personnel, assets, and services. Hazard characteristics of products, appropriate modes of transport, carrier selection and qualifications, packaging and container specifications, driver training requirements, financial issues, security precautions, warehousing risk, OSHA, hazardous materials handling, and customer assessment will be addressed in this course. (1 hr. lecture)

MAN3583
Project Management
3.00 credits

Students will learn project management concepts and theory, including attributes for a project lifecycle, global project management, benefits of project management, project management environments, planning and managing risk, project planning controls, and terminating a project. Prerequisite: MAN 201. (3 hr. lecture)

MAN3786
Sustainable Enterprise Planning
3.00 credits

Students will learn the assessment tools, design and construction considerations, and operating planning requirements for sustainable enterprises. Students will also learn the ecological and economic benefits of sustainability practices, including construction, operations, supply chain decisions, recycling, reusing, and reconditioning to preserve the environment by increasing revenues. Best practices, case studies, evolving trends and experimental efforts are also covered. Prerequisite: MAN 201. (3 hr. lecture)

MAN4113
Managing Diversity
3.00 credits

In this course, the student will examine, from a management perspective, mining

the value in the vast similarities and dissimilarities that accrue to today's workforce as a result of differences in individual backgrounds, abilities, socio-economic standing, gender, educational attainment, culture, religion, age, and other differentiating factors. Emerging styles of leadership among people of diverse backgrounds are explored as solutions, not as problems. (3 hr. lecture)

MAN4120
Leadership Challenges and Supervision
3.00 credits

The student will learn to analyze leadership theories and will acquire an awareness of the dynamics of supervisory and managerial decision-making. Emphasis will be placed on team building, crisis management, social and environmental responsibility, developing and communicating a vision, developing a full set of managerial and leadership skills. (3 hr. lecture)

MAN4162
Customer Relations for Managers
3.00 credits

Students will learn Customer Relations for Managers skills by exploring the dynamics of building solid and lasting relationships with customers. Topics will include doing business in a global environment, cultural diversity, the diversity of customs and global etiquette, negotiation tactics, global promotional tactics, and acceptable professional and corporate behaviors in a global business environment. (3 hr. lecture)

MAN4330
Compensation Management
3.00 credits

This course is a study of the strategic use of compensation system for the purposes of attracting, retaining, and motivating a competitive workforce. The student will address topics such as designing compensation systems, bases for pay, employee benefit programs, laws affecting compensation practices, and compensation challenges for various employee groups. Prerequisite: MAN3025, MAN3301.

MAN4335
Employee Benefit Planning
3.00 credits

This course focuses on the both wage and nonwage related benefits made available to employees by the firm and various related social and governmental programs. The student will examine various state and federal laws regarding employee benefits planning. Prerequisite: MAN3025, MAN3301.

MAN4350
Professional Development
1.00 credits

Students will learn to implement basic business etiquette, work habits, and career planning strategies required for successful transition into the business profession. Focus is on setting professional goals, preparing for a job search, networking, finding job leads, applying for jobs, interviewing for jobs, following up, and evaluating job offers. (1 hr. lecture)

MAN4352
Effective Employee Training
3.00 credits

This course focuses on professional development activities as performed by human resources specialists or organizational specialists. The student will analyze the benefits of employee training, establish employee development programs, and address the theories, issues, practices and problems regarding employee training and development. Prerequisite: MAN3025, MAN3301.

MAN4361
Organizational Staffing
3.00 credits

This course provides the student with an overview of the staffing function in organizations, including the topics of job analysis, forecasting, recruitment, selection, retention and turnover. It serves as an introductory course for the prospective human resources manager and as a survey of responsibility and activities of any manager with supervisory responsibilities. Prerequisite: MAN3025, MAN3301.

MAN4402
Employment Law and Regulation
3.00 credits

This course analyzes the federal and state regulation of the employment relationship, including wage and hour laws, EEO, and Affirmative Action programs. The student will address human resource issues such as employee benefits, insurance, workers' compensation, safety, health, employees' personal rights and collective bargaining legislation. Prerequisite: MAN3025, MAN3301.

MAN4520
Quality Management
3.00 credits

This course provides an understanding of various theories of quality management (QM). Students will learn how organizations can develop excellence through the adoption of continuous improvement and process management. The course analyzes and uses various process management techniques, continuous improvement tools, and strategies to improve quality. The conceptual and analytical skills acquired in this course enable students to provide leadership in shaping a culture for quality within an organization and determining the effectiveness of quality initiatives such as Total QM, Six Sigma, Process Capability, Process Control, and Customer Relationships. Prerequisite: MAN 2021. (3 hr. lecture)

MAN4523
Production Information Systems
3.00 credits

This course presents the fundamental aspects of computer technology required by the systems that provide data to, and derive information from, production in manufacturing. Students will learn the techniques to organize, store, manipulate data, report, derive and analyze production information, basics networking used in production, as well as various forms of information systems. Prerequisites: CGS 1060 and MAN 2021. (3 hr. lecture)

MAN4593
Supply Chain Management Theory & Methodology
2.00 credits

This course presents a range of advanced topics in integrated logistics and supply chain management. Students will learn new theoretical and methodological developments in the field of supply chain. Specific topics vary depending upon current industry developments and will incorporate the use of speakers in the classroom. Prerequisites: MAN 2021, 3583, 4523. (2 hr. lecture)

MAN4597
Global Supply Chain Management
3.00 credits

This course presents an overview of the management of sourcing, operations, and distribution processes along a supply chain in domestic and international markets. Students will learn how firms gain a competitive advantage through supply chain activities. Topics include: supply chain network design, purchasing, forecasting, inventory management, globalization and outsourcing, logistics, and information technology. Prerequisites: MAN 2021 and 3506. (3 hr. lecture)

MAN4720
Strategic Management Decision Making
4.00 credits

The student will learn the designing, planning, and implementation of strategic decision making in a business organization by identifying problems and designing possible solutions, formulating plans, goals, and feedback mechanisms. Through case studies, the student will conduct internal and external assessments to analyze effective strategic choices for companies. Must pass course with a grade of "C" or higher. (3 hr. lecture)

MAN4741
Change & Innovation Management
3.00 credits

In this course, the student will study the concepts and strategies for change management and diffusion of innovation. Topics covered include, but are not lim-

ited to, implementing change, becoming a learning organization, innovation process management, and technology forecasting.

MAN4894
Applied Case Studies in Management
3.00 credits

Students will learn to apply strategic management process through strategy formulation, implementation and evaluation utilizing the case study methodology. This course emphasizes on the identification of strategic management issues, evaluation of strategic goals, internal and external environment of the organization, as well as differentiating, categorizing and assessing strategic choices. (3 hr. lecture)

MAN4900
Capstone Project in Supervision and Management
4.00 credits

Student will apply and integrate the knowledge and skills learned throughout the program by completing a capstone project. Student will identify a business opportunity; conduct an industry feasibility assessment and operational mapping; evaluate market condition; construct a marketing plan, and formulate a financial plan for implementing and managing an existing or new business venture; and evaluate the role of ethic, social, and environmental responsibility within a business. Must pass course with a grade of "C" or higher. (3 hr. lecture)

MAN4940
Field Study and Research
2.00 credits

Students will learn to apply information and skills studied in core and concentration program courses through various special projects, field research, or internships designed for cogitative learning in a student-centered manner which requires the command, analysis, and synthesis of knowledge and skills. Prerequisites: MAN 2021, 3583, and TRA 1154. (2 hr. lecture)

MAN4941
Management Internship
3.00 credits

The student will learn management techniques by becoming an employee or intern (on a paid or unpaid basis) at either a not-for-profit or for-profit organization. The student will be required to work at least 144 hours required by the state to earn the credit for the internship. The student will work with their MDC Faculty and Supervising Employer to establish a set of assignments/learning goals that will be achieved during the semester. Prerequisite: Departmental Permission. (144 hr. internship)

MNA1130
Writing for Financial Services
1.00-3.00 credits

This course teaches business professionals a structured approach to create clear, effective, professional business writing, including e-mail, memos, letters, and reports. (1 hr. lecture)

MNA1322
Training Methods
3.00 credits

Provides practical experience in the four most effective training methods used in organizations today: demonstration performance, lecture, teaching interview and guided discussion. Emphasis is placed on analyzing the methods through student practice-teaching presentations. (3 hr. lecture)

MNA1345
Effective Supervision
3.00 credits

Students will learn to implement supervisory and management practices. Emphasis is placed on learning to communicate more effectively with employees, motivating employees, increasing one's leadership effectiveness, delegating, counseling problem employees, conducting performance reviews, maintaining a discrimination and harassment-free workplace, and managing time. Special fee. (3 hr. lecture)

MNA2120
Human Relations in Business
3.00 credits

Students will learn to implement human relations and communication skills necessary for superior performance and career advancement in the business profession. Emphasis is placed on learning and practicing effective interpersonal communication skills, giving criticism tactfully, expressing feelings constructively, being more sensitive to body language messages, and active listening. Other major topics emphasized are building self-esteem, learning how values and attitudes influence job performance and work relationships, assertion skills, group dynamics and team building, managing conflict, dealing with difficult people, and the challenges and opportunities of getting along in a culturally diverse workplace. Special fee. (3 hr. lecture)

SBM1000
Small Business Management
3.00 credits

Students will learn that growing a business involves shifting from the search for and validation of a business model to executing and scaling the business model. The skill sets are different and more formal management is often required. The course reviews the context and complexity of scaling a business and executing a business model. (3 hr. lecture)

TRA1154
Introduction to Supply Chain Management

3.00 CREDITS

This course is an introduction to the concepts, principles and techniques in the field of supply chain management (SCM) with particular emphasis on the economic significance of distribution to business and the U.S. economy. Students will learn the interrelationship between logistics and other areas of business, noting how the SCM pipeline can significantly impact customer loyalty by adding value. (3 hr. lecture)

Marketing

MAR1011
Principles of Marketing
3.00 credits

This introductory course emphasizes key concepts and issues underlying the modern practice of marketing. The course provides the student with a clear understanding of marketing's role in the 21st Century and introduces the student to both traditional and contemporary ways of marketing. The student will learn how marketers deliver value by satisfying customer needs and wants, determine which target markets to serve, and decide which goods and services are needed to serve these markets. (3 hr. lecture)

MAR1053
Marketing for Non-Profit Organizations
3.00 credits

This course provides an overview of the ways in which a non-profit organization can become market or customer driven. The management process directed at satisfying customer needs and wants through an exchange process is marketing in the non-profit organization. The student will examine this marketing orientation that enables a non-profit organization to achieve its objectives more effectively and produce organizational benefits. (3 hr. lecture)

MAR1211
Inventory and Warehouse Management
3.00 credits

Inventory and Warehouse Management is concerned with inventory control and cost concepts such as economic order quantity, reorder point, materials planning and just-in-time inventory systems. This course will discuss significant topics including strategic warehousing and distribution center decisions, storage facilities location and design, packing and containerization and performance measurements as they relate to the international environment. (3 hr. lecture)

MAR 1440
Fundamentals of Negotiations
3.00 credits

This course introduces the negotiation process and identifying consumer motivations. Students will analyze the various positions of negotiations from gaining leverage to making considerations. Students will examine a long-term sales strategy and how a balanced negotiation plan impacts it. (3 hr. lecture)

MAR 1502
Sales and Consumer Behavior
3.00 credits

This course introduces the process consumer's use in making purchase decisions. Students will analyze how developing a sales personality factors into producing prospects, leads, and ultimately generating sales. Students will identify how both buyer and seller behaviors interact in the sales process. (3 hr. lecture)

MAR1720
Marketing in a Digital World
3.00 credits

This course provides an introduction to new marketing concepts and the broad spectrum of digital marketing. Students will learn to utilize digital tools, social networks and media, strategies, and tactics to create awareness and to promote products and services to consumers and businesses. (3 hr. lecture)

MAR 1930
Introduction to Salesforce Marketing Cloud
1.00-3.00 credits

This course introduces students on how to build and personalize a 1:1 marketing campaign that can help connect and deliver the right message, to the right person, at the right time. Students will learn how to manage the most utilized marketing channels in the industry and discover new marketing tools.

MAR 1931
Fundamentals to Social Media and Search Engine Marketing
1.00-3.00 credits

This course provides an introduction on how to use social media and search engines for marketing and learning how to grow the brand value of companies. Students will be exposed to the latest social media trends and search engine marketing techniques.

MAR 1932
Email Marketing Fundamentals
1.00-3.00 credits

This course introduces email marketing using Mailchimp with powerful marketing tips and techniques that will help students jump forward and build a list of targeted subscribers. Students will learn a variety of applications ranging from creating email lists, marketing campaigns, sending emails and how to read reports and analytics.

MAR 1933
Fundamentals of Marketing Analytics
1.00-3.00 credits

This course provides an introduction on how to build and define a brand architecture and how to measure the impact of marketing efforts on brand value over time. As an introduction to Google Analytics, students will learn how to create an account, setup and navigate the Google Analytics interface.

MAR 2935
Fundamentals of Google Analytics
1.00-3.00 credits

This course illustrates the advanced analytical tools of Google Analytics to provide students with an understanding of how to use data to drive digital business and marketing campaigns. The course will introduce topics ranging from performance measurements, basic metric definition, socio-demo data and website traffic evaluation.

MAR2101
Social Media Marketing
3.00 credits

This course addresses the changes in marketing as a result of social media. The student will explore in-depth the role of social media in marketing. The student will focus on developing an effective marketing plan utilizing social media, with an emphasis on the importance of building an

online customer community and developing customer engagement and loyalty. (3 hr. lecture)

MAR2141
Export/Import Marketing
3.00 credits

Introduction to international marketing, with special emphasis on export/import procedures and documentation. The basic principles and concepts of the distribution of goods in international markets; provides an overview of the international marketing process, and the problem facing international marketers in a multinational setting. Emphasis is placed upon export/import transactions. (3 hr. lecture)

MAR2150
International Marketing
3.00 credits

Students will learn the four P's of product, price, place (distribution), and promotion as they relate to a global marketing strategy. The concepts are introduced within the international trade framework, as well as the cultural, social, economic, regulatory, and political environments affecting global marketing efforts. (3 hr. lecture)

MAR2154
International Trade
3.00 credits

This is an exploratory course in the dimensions of international trade theory and policy. The background mechanics of world trade, the effect of world resource distribution on international trade and an appreciation of the interdependencies among cultures is discussed. (3 hr. lecture)

MAR 2419
Technology in Sales
3.00 credits

This course introduces the various technological tools used in the sales process. Students will explore sales management software, data management, artificial intelligence sales technology, and automated sales functions. Students will analyze the benefits of utilizing technology and the competitive advantage it provides to a sales force. Prerequisites: MKA1160. (3 hr. lecture)

MAR2520
Hispanic Marketing Communications
3.00 credits

Students will learn how firms can formulate strategies to attract the U.S. Hispanic market and its various sub-segments. Emphasis is on strategy formulation and integrated marketing communications, including the use of case studies. (3 hr. lecture)

MAR 2703
Marketing Content, Branding and Strategy
3.00 credits

This course provides an introduction into branding and content strategy. Students will explore concepts, such as: integrated marketing communications, consumer psychology, buying motivations, appropriate content, branding, and marketing strategy as it relates to digital marketing. Students will have the opportunity to practice their writing and communications skills in the development of digital marketing content. (3 hr. lecture)

MAR 2704
Marketing Web Analytics
3.00 credits

This course helps students to develop a deep understanding of the digital analytics landscape. The student will learn how to identify which metrics are best to measure web, mobile, social and marketing channels, and how organizations use web analytics to obtain higher profits, improved customer relationships, and measurable value. (3 hr. lecture)

MAR2952
Digital Marketing Capstone
3.00 credits

This course provides a real-world approach to designing, implementing, managing and analyzing a digital marketing campaign or strategy. The student will engage in a comprehensive field experience designed to gain insights into the creative processes and demonstrate competence by applying the knowledge and concepts of marketing. (3 hr. lecture)

MAR3803
Marketing Strategy
3.00 credits

Students will learn how managers implement the marketing elements within a strategic planning framework. Emphasis is on decision-making, and the development and execution of marketing strategies related to product and brand development, channels of distribution, pricing, and promotional efforts under varying marketplace conditions. This course incorporates the use of case studies. Prerequisite: MAN2021. (3 hr. lecture)

MAR4203
Supply Chain Marketing
3.00 credits

Students will learn the management of traditional and emerging marketing channels, with emphasis on legal, economic, and ethical considerations in wholesale and retail inventory control, raw goods, finished product transportation and relationship management. Prerequisites: MAN 2021, 3506, and TRA 1154. (3 hr. lecture)

MKA1021
Fundamentals of Selling
3.00 credits

The nature and requirements of selling, including a consideration of buyer motivations and selling theories in relation to various buyer-seller situations. (3 hr. lecture)

MKA 1022
Relationship Selling
3.00 credits

This course introduces the role that relationship building plays in sales. Students will explore the communication process and the importance of interpersonal skills in developing a relationship for an effective sales strategy. Students will develop a sales presentation based around consumer needs. (3 hr. lecture)

MKA1041
Principles of Retailing
3.00 credits

Major types of retail institutions and their organizational structure; activities of the merchandising, operating and controlling divisions; buying and merchandising func-

tions; methods of financial, inventory, and credit control; and the selection and training of personnel. (3 hr. lecture)

MKA 1160
Customer Relationship Management
3.00 credits

This course provides an introduction into Customer Relationship Management (CRM). Students will be exposed to concepts ranging from identifying customer needs, communication channels, customer acquisition cost, demographics and target marketing. Students will learn the role CRM plays in a sales strategy. (3 hr. lecture)

MKA1161
Introduction to Customer Service
3.00 credits

A survey course which examines the attitudinal, behavioral and procedural basics which are common across all customer service sectors. An extensive vocabulary of customer service terms will be developed and students will understand their practical application in today's business environment. (3 hr. Lecture)

MKA1511
Principles of Advertising and Copywriting
3.00 credits

Techniques and behavioral factors used in advertising and copywriting which best motivate the consumer. Principles are applied in clear, concise written expression of various appeals used in selling goods and services. (3 hr. lecture)

MKA1531
Advertising Layout and Production
3.00 credits

Principles of effective advertising layout and production techniques. Laboratory sessions emphasize use of color, art work, choice of type and methods and techniques of producing ads for various media. Prerequisite: MKA 1511 or equivalent. (3 hr. lecture)

MKA1949**Co-op Work Experience 1: MKA**
3.00 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department Approval and completion of 1949 Co-op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

MKA 2024**Organizational Sales Management**
3.00 credits

This course introduces the role of a sales manager and sales team within an organization. Students will examine the management process of recruiting, leading, and setting sales targets and quotas for a sales team. Students will explore sales analytics that measure the effectiveness of an organizational sales strategy. (3 hr. lecture)

Mass Communications

MMC2000**Introduction to Mass Communications**
3.00 credits

Development of a critical perception of the mass communications process and its results in both printed and electronic media. Applications of the ethics and codes of journalism to the changing roles and forms of journalistic media. MMC 2000 will transfer for mass communications majors to various universities within the Florida State System. (3 hr. Lecture)

PUR2003**Public Relations**
3.00 credits

This course provides students with a broad spectrum of topics as related to the Public Relations profession. Current practices or organized programs used in business to earn public acceptance and good will for

products, services, personnel, and policies are explored, studied and experienced. The course employs a hands-on approach to applying public relations technique in hypothetical business situations. Students prepare press releases, brochures, and other collateral materials. (3 hr. lecture)

Mathematics College Level

MAC1105**College Algebra**
3.00 credits

This course introduces the student to the concept of functions and their graphs. The student will learn to graph linear, quadratic, rational, exponential, logarithmic, radical, power, and absolute value functions and their transformations. The student will perform operations on functions and compositions of functions, find the inverse of a function, apply the laws of logarithms to simplify expressions and solve equation, graph non-linear inequalities, and solve related applications and modeling problems. Prerequisite: MAT 1033 with a grade of "C" or better. Fulfills Gordon Rule computational requirement. (3 hr. lecture)

MAC1106**Integrated College and Precalculus Algebra**
5.00 credits

The student will learn to analyze linear, quadratic, polynomial, rational, radical, absolute value, composite, inverse, piecewise, exponential, and logarithmic functions, conic sections, systems of equations/inequalities, matrices and determinants, sequences & series, the Binomial Theorem, and applications of mathematical modeling including exponential growth and decay. Prerequisite: MAT1033 with a grade of "B" or better. Fulfills Gordon Rule computational requirement. (5 hr. lecture)

MAC1114**Trigonometry**
3.00 credits

This course will cover the analysis and graph of trigonometric functions and inverse trigonometric functions, the fun-

damental trigonometric identities, solutions to conditional trigonometric equations, solutions for both right and oblique triangles, operations on complex numbers in trigonometric form, work with vectors, graph both polar and parametric equations, and solutions of applications and modeling problems related to the above topics. Prerequisite: MAC 1105 or MAC 1106 with a grade of "C" or better. Special fee. Fulfills Gordon Rule computational requirement. (3 hr. lecture)

MAC1140**Pre-Calculus Algebra**
3.00 credits

This course will cover properties and graphs of algebraic, exponential, and logarithmic functions, piecewise-defined functions, the Fundamental Theorem of Algebra, solutions of polynomial equations, conic sections, systems of equations, matrices, and determinants, arithmetic and geometric sequences and series, the Binomial Theorem, and corresponding applications and modeling. Prerequisite: MAC 1105 with a grade of "C" or better or equivalent. Fulfills Gordon Rule computational requirement. (3 hr. lecture)

MAC1147**Pre-Calculus Algebra and Trigonometry**
5.00 credits

The course will cover the properties and graphs of algebraic, exponential and logarithmic functions, piecewise-defined functions, the Fundamental Theorem of Algebra, solutions of polynomial equations, conic sections, systems of equations, matrices and determinants, arithmetic and geometric sequences and series, the Binomial Theorem, graph of trigonometric functions and inverse trigonometric functions, the fundamental trigonometric identities, solutions to conditional trigonometric equations, solutions for both right and oblique triangles, operations on complex numbers in trigonometric form, vectors, graphs of polar and parametric equations, and solutions of applications and modeling problems related to the above topics. Prerequisite: MAC1105 with a grade of "C" or better or department-

tal permission. Fulfills Gordon Rule computational requirement. (5 hr. lecture)

MAC2233
Business Calculus
3.00 credits

This course introduces the basic concepts of differential and integral calculus for students majoring in business administration and related fields. Topics include limits, continuity, differentiation and integration of polynomials, logarithmic and exponential functions with applications to business, economics, and the life sciences. Prerequisite: MAC 1105 or MAC1106 with a grade of C or better or departmental permission. Fulfills Gordon Rule computational requirement. Special fee. (3 hr. lecture)

MAC2241
Life Science Calculus
3.00 credits

An introduction to calculus for the Life Sciences. Students will learn plane trigonometry, vectors and vector operations, algebraic and transcendental functions, differential and integral calculus, matrices, and elementary statistics with an emphasis in the application of these topics to the life sciences. Fulfills Gordon Rule computational requirement. Prerequisite: MAC 1105. (3 hr. lecture)

MAC2311
Calculus and Analytical Geometry 1
5.00 credits

This course includes topics in analytic geometry, limits, continuity, differentiation of algebraic and transcendental functions and their inverses, differentials, indeterminate forms and L'Hopital's Rule, introduction to integration and the fundamental theorem of calculus, basic rules of integration and integration by substitution, and applications of definite integrals and derivatives. Prerequisites: MAC1106 and MAC1114, or MAC1140 and MAC1114, or MAC1147 with a grade of "C" or better or departmental permission. Fulfills Gordon Rule computational requirement. (5 hr. lecture)

MAC2312
Calculus and Analytical Geometry 2
4.00 credits

This second semester calculus course the student will examine techniques of integration, applications of integration in STEM subjects, sequences and series, representation of functions by Taylor series, parametric equations, calculus in polar coordinates, and improper integrals. Prerequisite: MAC 2311 with a grade of "C" or better. Fulfills Gordon Rule computational requirement. (4 hr. lecture)

MAC2313
Calculus and Analytic Geometry 3
4.00 credits

The student will examine topics in analytic geometry in three dimensions, vectors and vector functions, curves and surfaces in three-space, partial differentiation and applications to optimization, multiple integrals and their applications, vector fields, line integrals and surface integrals, Green's Theorem, and the Divergence and Stokes' theorems. Prerequisite: MAC 2312 with a grade of "C" or better. Fulfills Gordon Rule computational requirement. (4 hr. lecture)

MAD1100
Discrete Mathematics for Computer Science
3.00 credits

This course introduces students to the principles of discrete mathematics that apply to computer science. Topics include set theory, logic, Boolean algebra, number theory, vectors and matrices, combinatorics, probability, relations, functions, and basic graph theory. Prerequisite: MAC1105. Special fee. Fulfills Gordon Rule computational requirement. (3 hr. lecture).

MAD2104
Discrete Mathematics
3.00 credits

This course introduces the student to the principles of discrete mathematics that apply to computer science. The student will examine set theory, logic, Boolean algebra, number theory, vectors and matrices, combinatorics, probability, relations, functions, and basic graph theory. Prerequisite: MAC1106 or MAC1140. Special fee. Fulfills

Gordon Rule computational requirement. (3 hr. lecture)

MAD3107
Discrete Structures
3.00 credits

Topics include sets, logic, switching circuits, Boolean algebra, combinatorics, probability, mathematical proofs, mathematical induction, functions, relations, and graph theory. Credit is not also given for MAD 2104. Prerequisite: MAC 2312. (3 hr. lecture)

MAP2302
Introduction to Differential Equations
3.00 credits

This course emphasizes ordinary differential equations, methods of solution of first order linear and nonlinear equations and applications, homogeneous and non-homogeneous linear equations with constant coefficients, differential operator methods, higher order linear equations; the Laplace transform and its properties, elementary existence theorems, series solutions, numerical solutions of first order equations, initial and boundary value problems, vibrations and waves, and an introduction to autonomous systems. Prerequisite: MAC 2312 with a "C" or better or equivalent. Fulfills Gordon Rule computational requirement. (3 hr. lecture)

MAP2402
APPLIED MATHEMATICS FOR SCIENCE AND ENGINEERING
3.00 credits

This course bridges mathematics and STEM fields by demonstrating applications such as angular momentum, vehicle positioning, coding, signals, graphics, sensors, and biological processes, using software and robotics. Students will learn topics such as: cross products, linear independence, subspaces, affine spaces, matrix operations, and eigenvectors, R^2 and R^3 , as well as regression and dimensional analysis. Prerequisite: MAC1105 (High School Geometry Recommended), Pre/Corequisite: MAC1114 or MAC1147. Fulfills Gordon Rule computational requirement. (3 hr. lecture)

MAS2103
Elementary Linear Algebra
3.00 credits

This course introduces the student to linear algebra and its applications. The student will examine linear systems of equations, matrices, determinants, vectors spaces, inner product spaces, linear transformations, linear independence and basis, eigenvalues and eigenvectors, decomposition theorems, and elements of proof writing. Prerequisite: MAC 2311. Fulfills Gordon Rule computational requirement. Special fee. (3 hr. lecture)

MAS3105
Linear Algebra
3.00 credits

This course is designed for students who are majoring in secondary mathematics education. Major topics include systems of linear equations, matrices, determinants, vector spaces, linear transformations, eigenvectors and eigenvalues, inner-product spaces and orthogonality. Prerequisite: MAC 2312. (3hr. lecture)

MAS3301
Algebraic Structures
3.00 credits

This course is designed for students who are majoring in secondary mathematics education, mathematics, science or engineering. Topics include set theory, basic properties of the integers, groups, rings, fields and the homomorphism's of these algebraic structures. Prerequisite: MAC 2312. (3 hr. lecture)

MAS4203
Number Theory
3.00 credits

Topics include mathematical induction, divisibility, the Euclidean algorithm, primes, the Fundamental Theorem of Arithmetic, number-theoretic functions, congruence, linear Diophantine equations, linear congruence's, the Chinese Remainder Theorem, and the theorems of Euler, Fermat, and Wilson. Prerequisite: MAC 2312. (3 hr. lecture)

MAT1033
Intermediate Algebra
3.00 credits

The student will learn the concepts of linear equations, quadratic equations, rational equations, radical equations, rational expressions and equations, complex numbers, graphing linear equations and inequalities in one and two variables, and related applications. Prerequisites: MAT0022C, or MAT0028, or MAT0057 or by placement score, or eligible exemption. (3 hr. lecture)

MAT1033L
Intermediate Algebra Recitation Hall
0.00 credits

The student will receive individualized, small group or whole group instruction to deepen their conceptual understanding of mathematics. The student will reinforce and apply content knowledge with effective problem-solving techniques and non-cognitive activities to make mathematics meaningful and relevant to their fields of study while strengthening the concepts needed to achieve the objectives of MAT1033. (2 hr. Lab)
 Corequisite: MAT1033

MGF1106
Mathematics for Liberal Arts 1
3.00 credits

The student will examine sets, logic, Euclidean geometry, probability, and statistics. Prerequisite: MAT0029 or MAT1033 or MGF1107. (3 hr. lecture). Fulfills Gordon Rule computational requirement. (3 hr. lecture)

MGF1107
Mathematics for Liberal Arts 2
3.00 credits

The student will learn the concepts of financial mathematics, linear and exponential growth, numbers and number systems, history of mathematics, elementary number theory, voting techniques, and graph theory. Prerequisite: Course, placement score, or eligible exemption). Fulfills Gordon Rule computational requirement. (3 hr. lecture)

MGF1118L
Math Computation Review
1.00 credits

The purpose of this course is to prepare for the computational section of the CLAST exam. This course will cover all of the computational competencies of the CLAS exam as well as general test taking skills. This course will not count as a Gordon Rule mathematics course. Prerequisite: Departmental Permission. May be repeated. (2 hr. lab)

MTB1103
Business Mathematics
3.00 credits

Reviews the basic arithmetic processes and covers mathematics and computations used in business including cash and trade discounts, commissions, markup, markdown, depreciation, simple and compound interest and bank discounts, payroll records, taxes, insurance, inventory, analysis of financial statements, statistics (mean, median, and mode), charts and graphs, and consumer applications. (3 hr. lecture)

MTB1302L
Business Mathematics Laboratory
1.00 credits

Provides the business mathematics student with support to achieve the objective of MTB 1103. (2 hr. Lab)

MTB1322
Technical Mathematics 2
3.00 credits

Applications of algebra, trigonometry, and analytic geometry needed in technical programs. Prerequisite: MAC 1105. (3 hr. lecture)

MTG2204
Geometry for Educators
3.00 credits

This course will introduce basic elements of Euclidean geometry that includes measurement and properties of plane and solid figures, sets, logic, and proofs Fulfills Gordon Rule computational requirement. Prerequisite: MAC1105 or MAC 1106. (3 hr. lecture)

MTG3214
Euclidean Geometry
4.00 credits

This course encompasses a range of geometry topics and pedagogical ideas for the teaching of geometry including properties of shapes, defined and undefined terms, postulates and theorems, logical thinking and proofs, constructions, patterns, and sequences, the coordinate plane, axiomatic nature of Euclidean geometry, and basic topics of non-Euclidean geometries. Prerequisite: MAC 1147. (4 hr. lecture)

Mathematics – Developmental Education

MAT0018
Developmental Mathematics 1
4.00 credits

The student will learn operations with whole numbers, integers, fractions, decimals, percent's and their applications; simplifying and evaluating algebraic expressions; ratios and proportions; solving linear equations in one variable and graphing solutions to linear inequalities. This course does not satisfy the college level mathematics requirements. Placement test scores or referral determine admission. Special Fee. (4 hr. lecture)

MAT0022
Developmental Mathematics Combined
5.00 credits

This course combines Developmental Mathematics I and II. The student will learn operations on signed numbers, solving linear equations and inequalities in one variable, operations on polynomials, factoring, integer exponents, radicals, graphing, and applications. This course does not satisfy the college level mathematics requirements. Placement test scores or referral determine admission. (5 hr. lecture)

MAT0028
Developmental Mathematics 2
4.00 credits

The student will learn topics which include operations with signed numbers; solving

linear equations and inequalities in one variable; operations with polynomials, factoring, integer exponents, radicals, rational expressions, graphing and applications of these topics. This course does not satisfy the college level mathematics requirements. Special Fee. Prerequisite: MAT0018 with a minimum grade of S or placement test scores. (4 hr. lecture)

MAT0029
Developmental Mathematics for Statistics
3.00 credits

This course will introduce the student to ratios, proportions, scaling, modeling with equations and inequalities, tables, graphs, linear functions, and non-linear functions, in preparation for Statistics. The student will learn the language of mathematics and mathematical symbols, procedural fluency, strategic competence, adaptive reasoning, quantitative investigative techniques, and questioning and solution-building skills. (3 hr. lecture)

MAT0057
Developmental Mathematics (Modules 3.0)
3.00 credits

Students will learn to strengthen arithmetic, geometry, and algebra skills. This course does not satisfy the college level mathematics requirements. Prerequisite: Placement test scores or departmental permission. Special fee. (3 hr. lecture)

Medical Laboratory Technology

MLT1040L
Introduction to Medical Laboratory Technology
1.00 credits

Collection of blood by venipuncture, skin puncture and donor room techniques. This includes handling of specimens, professional ethics, basic anatomy and physiology of the circulatory system, medical terminology and safety practices including those for AIDS patients. (2 hr. lab)

MLT1191
Histotechnology 1
3.00 credits

This course will introduce students to the fundamental principles of histologic technology. These include the principles of fixation, processing for paraffin-embedding, microtome sectioning, staining and cover-slipping and laboratory safety. (3 hr. lecture)

MLT1191L
Histotechnology 1 Lab
3.00 credits

This course will introduce students to fundamental laboratory skills and safety concepts in histologic technology. It includes laboratory aspects of specimen preparation, fixation, sectioning and routine staining. The student will also be introduced to the basic principles of record keeping, use and maintenance of laboratory equipment and quality control. (4 hr. lab)

MLT1195C
Tissue Identification 1
3.00 credits

This course will introduce students to the study of human organs and tissues for the purpose of developing histotechnological skills. It will include recognition, composition, and function of organs and tissues. Macroscopic and microscopic laboratory examination and evaluation of specimens will be included. (2 hr. lecture; 2 hr. lab)

MLT1196
Laboratory Safety and Regulations
2.00 credits

This course will introduce students to the rules and regulations governing safety in the histotechnology laboratory. It will also introduce students to the federal regulations pertaining to the histotechnology laboratory and methods of compliance. Prominent safety issues to be covered include the biological and chemical hazards in histology laboratory, formaldehyde standard, hazardous waste disposal and minimization. (2 hr. lecture)

MLT1210C
Clinical Urinalysis with Lab
2.00 credits

Theoretical concepts and practice in the collection and analysis of urine and other

body fluids by combination didactic and laboratory instruction. Performance of routine urinalysis procedures including microscopy with identification of related disease states. Laboratory fee. (1 hr. lecture; 2 hr. lab)

MLT1300
Clinical Hematology
2.00 credits

Didactic study of blood cells to include the origin, morphology, function and dysfunction of cells and related disease states of the blood. Theoretical concepts and principles of routine hematology procedures, quality control and instrumentation. Corequisite: MLT 1300L. (2 hr. lecture)

MLT1300L
Clinical Hematology Laboratory
2.00 credits

Manual and automated procedures in hematology. This includes blood cell counts and other basic hematologic procedures in the simulated laboratory and in the clinical setting. Corequisite: MLT 1300. Laboratory fee. (4 hr. lab/clinic)

MLT1330
Clinical Coagulation
1.00 credits

Didactic study of hemostasis, various clotting mechanisms, and related disease states. Corequisite: MLT 1130L. (2 hr. lecture)

MLT1330L
Clinical Coagulation Laboratory
1.00 credits

Performance of selected coagulation assays by manual and automated methods. The significance of test results to assess hemostasis in health and disease is included. Corequisite: MLT 1330. Laboratory fee. (2 hr. lab)

MLT1500
Clinical Immunology/Serology
2.00 credits

Theoretical concepts of the human immune system in health and disease. Relationships to immunohematology, infection, and serological procedures are analyzed. Pre/corequisite: BSC 2085; prerequisite: BSC 2086; corequisite: MLT 1500L. (2 hr. lecture)

MLT1500L
Clinical Immunology/Serology
Laboratory
1.00 credits

Performance of serological procedures that are identified in MLT 1500. The clinical significance of test results to disease states is included. Pre/corequisites: BSC 2085, 2086; corequisite: MLT 1500. Laboratory fee. (2 hr. Lab)

MLT1610
Clinical Chemistry 1
2.00 credits

Theoretical concepts and principles of carbohydrate, non-protein nitrogen, and electrolyte chemistry analyses with emphasis on their relationships to various disease states. Analytical procedures to assess liver function and acid-base balance are also included. Prerequisite: CHM 1025; corequisite: MLT 1610L. (2 hr. lecture)

MLT1610L
Clinical Chemistry 1 Laboratory
2.00 credits

Performance of chemistry procedures on body fluids with emphasis on manual and automated instrumentation. Prerequisite: CHM 1025L. Laboratory fee. (4 hr. lab/clinic)

MLT1752
Quality Control Laboratory
Mathematics
2.00 credits

Emphasis on mathematical computations related to procedures in the clinical laboratory including dilutions, solutions, calorimetry, hematology math, enzymatic calculations, calculations relating to renal function tests, and mathematical principles related to ionic solutions. The student will also be given specific statistical tools necessary for quality control procedures as well as interpretations of Levy-Jennings charts and troubleshooting tools. (2 hr. lecture)

MLT1840L
Histotechnology Practicum 1
5.00 credits

This is a clinical experience in which students will learn the techniques of processing human tissue for histological purposes. Prerequisite: MLT 2192. (240 hr. practicum)

MLT2180C
Infectious Diseases & Control
Practices
3.00 credits

This course will focus on the principles of transmission and control of diseases with an emphasis on infectious tissue specimens. Prerequisites: MCB 2013, 2013L. (2 hr. lecture; 2 hr. lab)

MLT2192
Histotechnology 2
3.00 credits

This course is a continuation of Histotechnology 1. Students will be introduced to advanced processing techniques of human tissue for anatomical pathology and concepts of instrumentation. Prerequisite: MLT 1191. (3 hr. lecture)

MLT2192L
Histotechnology 2 Laboratory
2.00 credits

This course is a continuation of Histotechnology Lab 1. Students will be introduced to more complex laboratory techniques in histotechnology. Prerequisite: MLT 1191L; corequisite: MLT 2192. (2 hr. lecture; 4 hr. lab)

MLT2197C
Tissue Identification 2
4.00 credits

This course will provide the students with the correlations between histotechnological procedures and diseases processes. Students will study the changes in tissue that are associated with various disease states, and will learn the usefulness of selected special stains and techniques in identifying disease processes. Prerequisite: MLT 1195C. (2 hr. lecture; 4 hr. lab)

MLT2198
Histochemistry
3.00 credits

This course will introduce students to organic chemistry of stains and special stains, dyes, hydrocarbons; aromatics, alcohols, ethers, aldehydes, ketones, carbonyl compounds, amines and amides. Prerequisites: CHM 1033, 1033L; corequisite: MLT 2198L. (3 hr. lecture)

MLT2198L
Histochemistry Laboratory
3.00 credits

This course will introduce students to biochemicals used in histology with emphasis on laboratory preparation and use of histochemical and immune histochemical stains. Prerequisite: CHM 1033L; corequisite: MLT 2198. Laboratory fee. (4 hr. lab)

MLT2403
Clinical Microbiology 2
2.00 credits

This course will provide a working knowledge of clinical bacteriology and should complement the Microbiology 2 Lab. The student will be exposed to some of the indigenous flora and the pathogenicity of microorganisms as they affect various body sites. Specimen transport, collection, laboratory identification techniques, and antimicrobial therapy also provides the knowledge base necessary for working in a clinical setting. (2 hr. lecture)

MLT2403L
Clinical Microbiology Lab 2
2.00 credits

This course is designed to complement the Microbiology 2 lecture and provide students with the necessary knowledge base and laboratory skills to effectively identify microorganisms associated with infectious diseases. (4 hr. lab)

MLT2440
Clinical Microbiology 1
1.00 credits

This course will provide an overview of clinical mycology and parasitology. Topics will include both parasites and fungi and will cover life cycles, epidemiology, and etiology. Emphasis will be given to the most commonly encountered mycoses and parasitic infestations. This course should be taken concurrently with Clinical Microbiology 1 Lab. (1 hr. lecture)

MLT2440L
Clinical Microbiology Lab 1
1.00 credits

This course provides a practical overview of mycology and parasitology. Students will also obtain hands-on experience working

with formalin preserve ova and parasites. They will also obtain the knowledge necessary to be able to identify at least the genus level of the most commonly encountered yeasts and fungi using microscopic and macroscopic techniques. This course should be taken concurrently with Clinical Microbiology. Corequisite: MLT 2440. Laboratory fee. (2 hr. lab)

MLT2525
Immunoematology
2.00 credits

Theoretical concepts involving blood group systems, hemolytic diseases, and blood bank procedures relating to transfusion and component therapy. Prerequisite: MLT 1500; corequisite: MLT 2525L. (2 hr. lecture)

MLT2525L
Immunoematology Laboratory
2.00 credits

Performance of basic blood typing, blood bank assays on prepared specimens, and appropriate quality control procedures. Interpretation of results is included. Prerequisite: MLT 1500L; corequisite: MLT 2525. Laboratory fee. (4 hr. lab)

MLT2620
Clinical Chemistry 2
2.00 credits

Theoretical concepts and principles of proteins, enzymes, and lipids with emphasis on their relationship to various disease states. Prerequisite: MLT1610; corequisite: MLT 2620L. (2 hr. lecture)

MLT2620L
Clinical Chemistry 2 Laboratory
1.00 credits

Performance on those analyses identified in MLT 2620 including electrophoresis and quality control. Prerequisite: MLT 1610L. Corequisite: MLT 2620. Laboratory fee. (2 hr. lab)

MLT2624L
Special Techniques in Clinical Chemistry
2.00 credits

The principles and performance of radioimmunoassay, EMIT, ELISA, and toxicological techniques for thyroid function, hormones,

and toxic substances. Prerequisites: MLT 1610, 1610L; corequisites: MLT 2620, 2620L. Laboratory fee. (4 hr. lab)

MLT2807L
Hospital Practicum: Immunoematology
3.00 credits

A supervised laboratory rotation in a clinical immunoematology facility. This provides the student an opportunity for the practice of skills previously learned and for the acquisition of new procedural skills. The development of interpersonal skills and the transition from student to professional are emphasized. Prerequisites: MLT 2525, 2525L; corequisite: MLT 2930. (144 hr. practicum)

MLT2809L
Hospital Practicum: Hematology
3.00 credits

A supervised laboratory rotation in a clinical hematology facility. This provides the student an opportunity for the practice of skills previously learned and for the acquisition of new procedural skills. The development of interpersonal skills and the transition from student to professional are emphasized. Prerequisites: MLT 1300, 1300L, 1330, 1330L; corequisite: MLT 2930. (144 hr. practicum)

MLT2810L
Hospital Practicum: Chemistry
3.00 credits

A supervised laboratory rotation in a clinical chemistry facility. The development of interpersonal skills the transition from student to professional are emphasized. This provides the student an opportunity for the practice of skills previously learned and for the acquisition of new procedural skills. Prerequisites: MLT 2620, 2620L, 2624L; corequisite: MLT 2930. (144 hr. Practicum)

MLT2811L
Hospital Practicum: Microbiology
3.00 credits

A supervised laboratory rotation in a clinical microbiology facility. This provides the student an opportunity for the practice of skills previously learned and for the acquisition of new procedural skills. Prerequisites:

MLT 2403, 2403L; corequisite: MLT 2930. (144 hr. practicum)

MLT2841L
Histotechnology Practicum 2
5.00 credits

This clinical experience will introduce the students to the basic techniques of microtomy, staining and preparation of human tissue for anatomical pathology. Corequisite: MLT 1840L. (45 hr. practicum)

MLT2930
Medical Laboratory Technology Seminar
2.00 credits

Clinical correlations, professional issues, updates in Medical Laboratory Technology with student's reports on recent professional journal articles, and the use of microcomputers in the laboratory. Corequisite: MLT 2807L, 2809L, 2810L, 2811L. (2 hr. seminar)

MLT2931
Histotechnology Seminar
3.00 credits

This course will prepare students for career entry. Emphasis will be placed on current topics in histotechnology, legal and ethical responsibilities of health care professionals, knowledge of the health care delivery system, including health policies and financing and employability skills. Corequisite: MLT 1840L. (2 hr. lecture)

Meteorology

MET1010
Introduction to Weather
3.00 credits

An introduction to fundamentals of weather and their impact on human activities. Topics include temperature, humidity, clouds, precipitation, air masses fronts, and storms. Emphasis is on understanding how these processes take place and their results. Pre/corequisite: PSC 1515. Optional laboratory, MET 1010L. (3 hr. lecture)

MET1010L
Introduction to Weather Laboratory
1.00 credits

An elective laboratory to accompany MET 1010. An investigation through experimentation of fundamental meteorological problems. Map analysis, temperature and humidity experiments. Pre/corequisite: MET1010. Laboratory fee. (2 hr. lab)

MET3702
General Meteorology
3.00 credits

This course will cover general knowledge in meteorology. The student will learn about the atmospheric structure and composition, weather and circulation systems, physics of atmospheric processes; as well as global climate and climate change and their impact on human activities. Corequisite MET 3702L. (3 hr. lecture)

MET3702L
General Meteorology Laboratory
1.00 credits

The meteorology lab is a separate 1 credit course designed to be taken in conjunction with a meteorology lecture. Experiments performed each week are chosen with the material being studied in the lecture. Corequisite: MET3702. (2 hr. lab)

Military Science

AFR1101
The Foundation of the United States Air Force - Part 1
1.00 credits

This course is designed to show the potential Air Force officer, what role today's Air Force plays in defense of our nation, what role they can fill in today's Air Force, and finally what the Air Force offers them both today and AFROTC and later should they choose the Air Force as a profession after AFROTC.

AFR1111
Introduction to the United States Air Force - Part 3 Sem Basic Air Force ROTC
1.00 credits

This course is designed to examine general aspects of air and space power through a historical perspective. We will cover the time period from the first balloons and dirigibles to the space-age global positioning systems to the Persian Gulf War. Historical examples will be provided to extrapolate the development of Air Force capabilities and missions to demonstrate the evolution of what has become today's U.S. Air Force air and space power.

AFR2130
The Foundation of the United States Air Force - Part 2
1.00 credits

This course is designed to show the potential Air Force officer, what role today's Air Force plays in defense of our nation, what role they can fill into today's Air Force, and finally what the Air Force offers them both today and AFROTC and later should they choose the Air Force as a profession after AFROTC.

AFR2131
Introduction to the United States Air Force - Part 2
1.00 credits

This course is designed to examine general aspects of air and space power through a historical perspective. We will cover the time period from the first balloons and dirigibles to the space-age global positioning systems to the Persian Gulf War. Historical examples will be provided to extrapolate the development of Air Force capabilities and missions to demonstrate the evolution of what has become today's U.S. Air Force air and space power.

MSL1001
First Year Basic Army ROTC
2.00 credits

Introduction to Army organizations, military customs, basic marching drills, map reading, and land navigation techniques, drown-proofing, rappelling, river crossing

techniques, and physical fitness. Physical fitness training and laboratory required.

MSL1002

First Year Basic Army ROTC

2.00 credits

Continues basic leadership training. Additionally introduces students to officer duties, awards and decorations, individual military skills, radio communication procedures and physical fitness. Physical training and lab required.

MSL2101

Second Year Basic Army ROTC

2.00 credits

Instruction in squad and platoon marching drills, military training and inspections, leadership techniques, advanced map reading, and refresher in skills learned at earlier levels. Physical fitness training and lab required.

MSL2102

Second Year Basic Army ROTC

2.00 credits

Continued instruction in drill and ceremony, nuclear, biological and chemical warfare, practical land navigation, orienteering, and introduction to combat troop leading procedures. Physical fitness training and laboratory required.

MSL3201

Leadership and Problem Solving

3.00 credits

This is a leadership & problem solving course for ROTC Cadets. Students will learn to examine skills that underlie effective problem solving, analyze military missions and plan military operations, and execute squad battle drills. Prerequisite: Cadets Eligible to Contract per ROTC Enrollment Officer and/or MAN2021. (3 hr. lecture)

MSL3202

Leadership and Ethics

3.00 credits

This course explores leader responsibilities that foster an ethical command climate. Students will learn to develop Cadet Leadership competencies, and apply principles and techniques of effective written and oral communication. Prerequisite:

Cadets Eligible to Contract per ROTC Enrollment Officer and/or MAN2021. (3 hr. lecture)

Music

MUC1201

Composition 1

2.00 credits

A two semester sequential course introducing the basic elements and construction blocks of a musical composition and analysis. In addition, students will be expected to compose original short pieces as well as have them performed in a composition recital at the end of the semester. (2 hr. lecture)

MUC1202

Composition 2

2.00 credits

A two semester sequential course introducing the basic elements and construction blocks of a musical composition and analysis. In addition, students will be expected to compose original short pieces as well as have them performed in a composition recital at the end of the semester. (2 hr. lecture)

MUC2001

Experimental Composition

3.00 credits

Experience with 20th century compositional techniques through listening, analysis, composition, and performance. May be repeated for credit by permission of the instructor. Prerequisite: MVK 1111. (3hrs. per week)

MUC2101

Composition Skills 3

2.00 credits

This course is a continuance of the composition workshop at a more advanced level. Student's receive private lessons in music composition. Students are encouraged to apply their theoretical skills to a diverse media, including writing for a variety of small ensembles. This will culminate into a mini recital at the end of the term which will also help prepare the student to effectively coordinate and organize performances of his or her own works in front of

an academic and general audience. In the process the student learns to work with a variety of performers and appreciate exposure and feedback from a diverse group of people. (2 hr. lecture)

MUC2102

Composition Skills 4

2.00 credits

This course is a continuance of Composition Skills 3 at a more advanced level. Students receive private lessons in music composition. Students are encouraged to apply their theoretical skills to a diverse media, including writing for a variety of small ensembles. This will culminate into a mini recital at the end of the term which will also help prepare the student to effectively coordinate and organize performances of his or her own works in front of an academic and general audience. In the process the student learns to work with a variety of performers and appreciate exposure and feedback from a diverse group of people. (2 hr. lecture)

MUC2601

Introduction to Songwriting

3.00 credits

This course explores the art and craft of popular songwriting. Students will learn the basics of lyric writing, chord progressions, melodic creation, and structure as they apply to popular song. (3 hr. lecture)

MUC2617

Songwriting 2

3.00 credits

This course continues the study of the art and craft of popular songwriting. Students will learn techniques of lyric writing, chord progressions, melodic creation, and structure as they apply to popular song. Prerequisite: MUC2601. (3 hr. lecture)

MUE1430

Voice Techniques

1.00 credits

Class instruction designed to provide basic performance and teaching skills in voice or instruments from each area. (2 hrs. per week)

MUE1440
String Techniques
1.00 credits

Class instruction designed to provide basic performance and teaching skills in voice or instruments from each area. (2 hrs. per week)

MUH2111
Survey of Music History 1
3.00 credits

An introduction to the history of musical styles from antiquity through the Baroque Period by the examination of representative literature. (3 hr. lecture)

MUH2112
Survey of Music History 2
3.00 credits

An introduction to the history of musical styles from the Baroque Period through the present by the examination of representative literature. Prerequisite: MUH 2111. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

MUL1010
Music Appreciation
3.00 credits

The development of the various styles, forms, and idioms, in music. The emphasis is given to the student's ability to understand and enjoy music. (3 hr. lecture)

MUL2380
Jazz and Popular Music in America
3.00 credits

A survey of the development of popular and jazz music with an emphasis on musical styles and outstanding artists. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

MUM1949
Co-op Work Experience 1: MUM
3.00 credits

This course is designed to provide students with training in their chosen field of study (Sound Engineering or related area) through "on the job" work experience. Students are graded on the basis on documentation of learning acquired as reported by student and employer. Students will be assigned specific course prefixes related to

their academic major prior to registration. All students must contact the Cooperative Education office to obtain registration approval. Prerequisite: Co-op department approval. (3 hr. lecture and field experience)

MUM2030
Commercial Music Performance
3.00 credits

A performance experience with concentration on repertoire, style and management of commercial engagements. Includes transposition, harmonization and show reading. Prerequisite: MUT 1112 or permission of instructor. May be repeated for credit. (3 hrs. per week)

MUM2600
Sound Recording 1
3.00 credits

An introduction to techniques, practices and procedures in making eight-track recordings. The student will gain experience with acoustical balancing, editing and over-dubbing in a wide variety of sound situations. Corequisite: MUM 2600L. (3 hr. lecture)

MUM2600L
Sound Recording 1 Lab
1.00 credits

Participation in MUM 2600L offers students directed "hands on" experience coinciding with lectures in MUM 2600. Corequisite: MUM 2600. Special fee. (2 hr. lab)

MUM2601
Sound Recording 2
3.00 credits

This course explores advanced multi-track recording skills and audio production techniques. Emphasis is on mixing board skills, microphone techniques, and use of outboard equipment and live 2 track recording. Prerequisite: MUM 2600. (3 hr. lecture)

MUM2601L
Sound Recording 2 Lab
1.00 credits

Corequisite for MUM 2601. Advanced Sound Recording. Participation in MUM 2601L offers students directed "hands on" experience paralleling lectures in MUM

2601. Corequisite: MUM 2601. Special fee. (2 hr. lab)

MUM2604
Multi-Track Mix down Techniques
1.00 credits

This course deals with the application of signal processing gear to multi-track master recording mix down to 2 track stereo mastering machines; includes editing and packaging. Prerequisites: MUM 2600, 2600L. (2 hr. lab)

MUM2605
Multi-Track Production Techniques 1
1.00 credits

Multi-track production technique offers students with a background in multi-track recording an opportunity to sharpen their skills in recording, mix down editing, and audio production. Prerequisites: MUM 2600, 2600L. Must precede MUM 2606 and 2607. (1 hr. lecture)

MUM2606
Multi-Track Production Techniques 2
1.00 credits

Multi-track production technique offers students with a background in multi-track recording an opportunity to sharpen their skills in recording, mix down editing, and audio production. Prerequisites: MUM 2600, 2600L, 2605. (1 hr. lecture)

MUM2623C
MIDI Electronic Music 1
2.00 - 3.00 credits

This course is designed to acquaint music students with basic applications of Musical Instrument Digital Interface (MIDI) for the purpose of composition and performance and learning pre-production concepts with multi-track recording studio. Emphasis will be placed on keyboards, outboard gear, drum machines, and computer-assisted operations. Special fee. (1-2 hr. lecture; 2 hr. lab)

MUM2624C
MIDI-Electronic Music 2
2.00 - 3.00 credits

This course is designed to provide music students further study in the application of the Musical Instrument Digital

Interface (MIDI). Emphasis will be placed on advanced techniques in sequencing, routing, synchronization, composition and arranging. Prerequisite: MUM 2623C. Special fee. (1-2 hr. lecture; 2 hr. lab)

MUM2640L

Multi-Track Mix down Techniques

1.00 credits

This course deals with the application of signal processing gear to multi-track master recording mix down to 2 track stereo mastering machines includes editing and packaging. Prerequisites: MUM 2600, 2600L. Laboratory fee. (2 hr. lab)

MUM2700

Music Business 1

3.00 credits

The fundamentals, guidelines and the use of copyright law, contracts, agencies and management, publishing, song writing, recording production and marketing. Prerequisite: One year of college-level music study or equivalent. Corequisite: MUM 2703. Special fee. (3 hr. lecture)

MUM2702

Music Business 2-Careers

3.00 credits

A systematic look at career options in the Music Industry. Topics discussed include record promotion, marketing, distribution, music publishing, working in the local music industry, radio and television, film scoring, advertising, "jingle" production, teaching as a business, music merchandising, arts administration, working in the national and international scene, live performance, and recording agreements. Students will develop a written business plan for their own music business enterprise and write their resumes. This course will prepare the student for the Music Business Internship. Special fee. Corequisite: MUM 2704. (3 hr. lecture).

MUM2703

Music Business 3-Computer

3.00 credits

This course will provide an overview, and hands-on experience, with a wide variety of computer-based music technology and cross-platform software applications used

within the Music Business environment. Software studies include Microsoft Word (word-processing), Microsoft Excel (spreadsheet), Microsoft PowerPoint (presentation), and Adobe Photoshop (scanning, photo touch-up). Students will present projects in class. Prerequisite: Basic computer experience with the Macintosh and/or Windows 95 operating systems. Special fee. (6 hr. lab)

MUM2704

Music Business 4-Computer

Applications

3.00 credits

This course will provide an overview, and hands-on experience, with computer-based music technology and cross-platform software applications used within the Music Business environment. Software studies include Adobe Photoshop, Adobe PageMaker (page layout), Quicken (financial record keeping), and Adobe Page Mill (Web page development). Students will create their own Web site, useful for promotion and networking in their own Music Business enterprise. Students will present projects in class. Special fee. Prerequisite: MUM 2703. (6 hr. lab)

MUM2949

Co-op Work Experience 2: MUM

3.00 credits

This course is designed to continue training for a second term in a student's field of study through work experience in sound engineering or related area. Students are graded on the basis on documentation of learning acquired as reported by student and employer. All students must contact the Cooperative Education office to obtain registration approval. Prerequisite: Co-op approval and completion of MUM 1949 Co-op Work Experience. (3 hr. lecture and field experience)

MUN1120

Concert Band

1.00 - 3.00 credits

The opportunity for performing concert band literature through participation in the College Band. Emphasis is on music originally composed for bands. It may be repeated for credit. (2-6 hr. lab)

MUN1210

Symphony Orchestra

1.00 - 3.00 credits

Experience in performing and reading orchestra literature through participation in the College Orchestra. This course is open to all students. May be repeated for credit. (2-6 hr. lab)

MUN1310

College Choir

1.00 credits

An opportunity for participation in the College Choir. Repertoire includes a wide range of music literature from various periods. This course is open to all students. May be repeated for credit. (3 hrs. per week)

MUN1340

Chamber Singers

1.00 credits

An opportunity for talented singers to study and perform the smaller choral works, with special emphasis on the madrigal. This course is open to all students with the permission of the instructor. May be repeated for credit. (3 hrs. per week)

MUN1391

Gospel Ensemble

1.00 credits

Provides an opportunity to study and perform music of Black composers with emphasis placed on contemporary gospel idioms. This course is open to all students with the permission of the instructor. May be repeated for credit. (3 hrs. per week)

MUN1420

Chamber Music, Woodwind Ensemble

1.00 - 3.00 credits

A performing group introducing students to literature for small woodwind ensembles. Chamber music from Baroque to modern is covered. This course is open to all students with the permission of the instructor. May be repeated for credit. (3-9 hrs. per week)

MUN1430

Chamber Music, Brass Ensemble

1.00 - 3.00 credits

A performing group providing experience with brass literature from the five major

periods. This course is open to all students with the permission of the instructor. May be repeated for credit. (3-9 hrs. per week)

MUN1440
Percussion Ensemble
1.00 - 3.00 credits

An opportunity for percussion majors to gain experience in ensemble playing. Open to all percussion students with the permission of the instructor. May be repeated for credit (3-9 hrs. per week)

MUN1460
Chamber Music, Strings and Mixed Ensemble
1.00 - 3.00 credits

The performance of ensemble literature involving strings or other instruments in combination with strings. Particular attention given to literature of the five major periods. Open to all students with the permission of the instructor. May be repeated for credit. (3-9 hrs. per week)

MUN1480
Guitar Ensemble
1.00 - 3.00 credits

Extended rehearsal schedule provides acquisition of specialized ensemble performance techniques. Literature includes classical and popular. May be repeated for credit or taken for variable (1-3) credit by permission of instructor. (3-9 hrs. per week)

MUN1710
Jazz Workshop
1.00 - 3.00 credits

A course providing the opportunity for performing both modern big-band jazz as well as experience in smaller combo groups. This course is open to all students with permission of the instructor. May be repeated for credit. (3-9 hr. lab)

MUN1720
Vocal Jazz/Pop Ensemble
1.00 credits

The study and performance of jazz and commercial music for vocal ensemble, including improvisation. May be repeated for credit. (3 hrs. per week)

MUN2030
Performance Lab
1.00 credits

Lab held in conjunction with weekly concert hour performance. This course is designed to provide music majors with the varied musical experiences necessary to broaden a musician's background. May be repeated for credit. (1 hr. lecture)

MUN2341
Vocal Ensemble
2.00 - 3.00 credits

An in-depth performance experience including classical and popular choral literature. Extensive public performance schedule provides professional training. Prerequisite: permission of instructor. Maybe repeated for credit. (4-6 hr. Lab)

MUN2410
String Ensemble
2.00 - 3.00 credits

Extended rehearsal schedule provides acquisition of specialized ensemble performance techniques. Literature includes classical and popular. May be repeated for credit. By permission of instructor. (4-6 hr. Lab)

MUN2473
Early Music Consortium
1.00 credits

The performance of chamber music to introduce the instruments, literature, styles, and performance practices of the music of the middle Ages, Renaissance, and Baroque periods. Enrollment requires the instructor's permission and selectivity is dependent upon the instrumentation required and the instruments available. Prerequisite: by audition or permission of instructor. May be repeated for credit. (3 hrs. per week)

MUN2711
Jazz Ensemble
2.00 - 3.00 credits

A performing group providing advanced skill in reading and interpreting jazz literature. Prerequisite: Permission of instructor. May be repeated for credit. (4-6 hr. Lab)

MUN2712
Studio Jazz
1.00 credits

The class will rehearse standard and original tunes commonly played by small jazz ensembles. The student will develop the basic skills required of a musician performing with such a group, and will develop an understanding of the musical concepts involved in the performance of this style of music. A small ensemble would consist of a rhythm section plus 1-4 horns. The class will perform jazz tunes including, but not limited to, those based on the 12-bar blues form, I Got Rhythm chord changes, II-V-I chord changes, and the modes of major and minor scales. Concepts will include the various approaches to soloing, the use of chord substitutions, chord-scale relationships, playing in correct rhythmic time, and the use of dynamics and rhythmic variation. Group concepts discussed will include rhythm section function, musical interplay between soloist and rhythm section, and the creation of introductions, interludes, and endings. May be repeated for credit. (3 hr. lecture)

MUO1501
Opera Workshop
1.00 - 3.00 credits

The study and performance of scenes from standard operas and musical comedies with special attention to the fundamentals of stage movement, acting, and characterization as related to musical production. This course is open to all students. May be repeated for credit. (3-9 hr. lab)

MUS1211
Diction in Singing 1
2.00 - 3.00 credits

Diction in Singing 1 will introduce the student to the International Phonetic Alphabet and instruct the student to the proper diction for English to the standard Vocal Repertoire. Emphasis will be placed on practical application through actual performances by students of assigned and individually selected songs. (2-3 hr. lecture)

MUS1241
Diction in Singing 2
2.00 - 3.00 credits

Diction in Singing 2 will introduce the student to the International Phonetic Alphabet and instruct the student in the proper diction for Italian in the standard Vocal Repertoire. Emphasis will be placed on practical application through actual performance by students of assigned and individually selected songs. Prerequisite: MUS 2231. (2-3 hr. lecture)

MUS1935
Piano Seminar
1.00 - 3.00 credits

Extended rehearsal schedule provides acquisition of specialized ensemble and accompanying performance techniques. Literature includes classical and popular. May be repeated for credit or taken for variable (1-3) credits by permission of instructor. (7.5 hrs. per week)

MUT1001
Fundamentals of Music Theory
3.00 credits

Basic music reading, notation, scales, intervals, triads, keys, rhythm, and meter. For students with little or no previous musical experience. Corequisite: MUT 1003. (3 hr. lecture)

MUT1003
Fundamentals of Music Theory Lab
1.00 - 3.00 credits

The development of basic aural skills through sight singing and ear training exercises. Corequisite: MUT 1001. (2-6 hrs. per week)

MUT1111
Theory 1
3.00 credits

The techniques of writing four-part chord progressions using root position and inversions of the primary and secondary triads and the dominant and supertonic seventh; also, non-harmonic tones, melodic writing, and an introduction modulation. Prerequisite: MUT 1001 or passing score on departmental placement exam; corequisites: MUT1241. (3 hr. lecture)

MUT1112
Theory 2
3.00 credits

The techniques of writing four-part chord progressions using root position and inversions of the primary and secondary triads and the dominant and supertonic seventh; also, non-harmonic tones, melodic writing, and an introduction modulation. Prerequisite: MUT 1111 or passing score on departmental placement exam; corequisites: MUT 1242. (3 hr. lecture)

MUT1241
Sight singing & Ear Training 1 Year
1.00 - 2.00 credits

The development of aural skill by means of rhythmic and melodic dictation and sight singing. Prerequisite: MUT 1241 for 1242; corequisites: MUT 1111, 1112. (2-4 hrs. per week)

MUT1242
Sight singing & Ear Training 2 Year
1.00 - 2.00 credits

The development of aural skills by means of rhythmic and melodic dictation and sight singing. Prerequisite: MUT 1241 for 1242; corequisites: MUT 1111, 1112. (2-4 hrs. per week)

MUT2116
Theory 3
3.00 credits

The continuation of modulation and the presentation of diatonic sevenths, secondary dominants, altered chords, augmented and Neapolitan sixths; melodic and harmonic analysis of selected works; ninth, eleventh, and thirteenth chords, and instrumental part writing. Prerequisites: MUT 1112; corequisites: MUT 2246. (3 hr. lecture)

MUT2117
Theory 4
3.00 credits

The continuation of modulation and the presentation of diatonic sevenths, secondary dominants, altered chords, augmented and Neapolitan sixths; melodic and harmonic analysis of selected works; ninth, eleventh, and thirteenth chords, and

instrumental part writing. Prerequisites: MUT 2116; corequisites: MUT 2247. (3 hr. lecture)

MUT2238
Introduction to Jazz Keyboard Harmony
1.00 credits

Jazz harmonic progression as related to music arranging. Includes jazz harmonization of melodic lines, chord symbol interpretation and chord construction. Prerequisite: MVK 1111 or permission of instructor; corequisite: MUT 2351. Special fee. (2 hrs. per week)

MUT2239
Jazz Keyboard Harmony 2
1.00 credits

Experience with extended and altered harmonic progression. Will include harmonic analysis and bitonal structures. Prerequisite: MUT 2238; corequisite: MUT 2352. (2 hrs. per week)

MUT2246
Sight singing and Ear Training 1
1.00 - 2.00 credits

Develops aural and visual skills by means of rhythmic, melodic and harmonic dictation and sight singing. Emphasis is on chromatic materials. Prerequisites: MUT 1242 for 2246, MUT 2246 for 2247; corequisites: MUT 2116, 2117. (2-4 hrs. per week)

MUT2247
Sight singing and Ear Training 2
1.00 - 2.00 credits

Develops aural and visual skills by means of rhythmic, melodic and harmonic dictation and sight singing. Emphasis is on chromatic materials. Prerequisites: MUT 1242 for 2246, MUT 2246 for 2247; corequisites: MUT 2116, 2117. (2-4 hrs. per week)

MUT2351
Introduction to Popular Music Arranging
3.00 credits

Provides basic experience with instrumental, ranges, transpositions, two- and three-part writing. Prerequisite: MUT 1112 or permission of instructor; corequisite: MUT 2238. (3 hrs. per week)

MUT2352
Popular Music Arranging 2
3.00 credits

A continuation of Introduction to Popular Music Arranging with the addition of four-, five- and six-part writing. Concentration on scoring techniques. Prerequisite: MUT 2351; corequisite: MUT 2239. (3 hrs. per week)

MUT2641
Introduction to Jazz Improvisation 1
3.00 credits

A performance experience with concentration on scales, rhythmic patterns, chord progression, and blues forms. Prerequisite: MVK 1111 or permission of instructor; corequisite: MUT 2351. Special fee. (3 hrs. per week)

MUT2642
Jazz Improvisation 2
3.00 credits

A continuation of Introduction to Jazz Improvisation 1 with the introduction to modal improvisation, jazz structures, and complex harmonic progressions. Prerequisite: MUT 2641 (3 hrs. per week)

MVB1011
Pre-Applied Trumpet
2.00 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fees. (1 hr. per week)

MVB1012
Pre-Applied French Horn
2.00 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fees. (1 hr. per week)

MVB1013
Pre-Applied Trombone
2.00 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fees. (1 hr. per week)

MVB1014
Pre-Applied Tuba
2.00 credits

Private instruction for those music students who are not prepared to perform at the college music major level. Special fees. (1 hr. per week)

MVB1015
Pre-Applied Tuba
2.00 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fees. (1 hr. per week)

MVB1211
Trumpet Secondary Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB1212
French Horn Secondary Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB1213
Trombone Secondary Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB1214
Baritone Horn Secondary Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB1215
Tuba Secondary Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB1311
Trumpet Principal Instrument - First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB1312
French Horn Principal Instrument - First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB1313
Trombone Principal Instrument - First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB1314**Baritone Horn Principal Instrument - First Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB1315**Tuba Principal Instrument - First Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB2221**Trumpet - Secondary Instrument Second Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB2224**Baritone Horn Secondary Instrument Second Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB2225**Tuba Secondary Instrument Second Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVB2321**Trumpet Principal Instrument Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB2322**French Horn Principal Instrument Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB2323**Trombone Principal Instrument Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB2324**Baritone Horn Principal Instrument Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVB2325**Tuba Principal Instrument Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ1010**Pre-Applied Jazz Piano****2.00 credits**

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVJ1011**Pre-Applied Jazz Voice****2.00 credits**

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVJ1013**Pre-Applied Jazz Guitar****2.00 credits**

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVJ1014**Pre-Applied Jazz Electric Bass****2.00 credits**

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVJ1016**Pre-Applied Jazz Saxophone****2.00 credits**

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVJ1017**Pre-Applied Jazz Trumpet****2.00 credits**

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVJ1018**Pre-Applied Jazz Trombone****2.00 credits**

Private instrumental for those music students who are not prepared to perform at

the college music major level. Special fee. (1 hr. per week)

MVJ1019
Pre-Applied Jazz Percussion
2.00 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVJ1210
Jazz Piano Secondary Instrument
First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ1211
Jazz Voice Secondary Instrument
First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ1212
Jazz Violin Secondary Instrument
First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ1213
Jazz Guitar Secondary Instrument
First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ1214
Electric Bass Secondary Instrument
First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ1215
Jazz Flute Secondary Instrument
First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ1216
Jazz Saxophone Secondary
Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ1217
Jazz Trumpet Secondary Instrument
First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ1218
Jazz Trombone Secondary Instrument
First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ1219
Jazz Percussion Drum Set Secondary
Instrument 1 year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ1310
Jazz Piano Principal Instrument First
Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ1311
Jazz Voice Principal Instrument First
Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ1313
Jazz Guitar Principal Instrument First
Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ1314
Electric Bass Principal Instrument
First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ1315**Jazz Flute Principal Instrument First Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ1316**Jazz Saxophone Principal Instrument First Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ1317**Jazz Trumpet Principal Instrument First Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ1318**Jazz Trombone Principal Instrument First Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ1319**Jazz Percussion Drum Set Principal Instrument First Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ2220**Jazz Piano Secondary Instrument Second Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ2221**Jazz Voice Secondary Instrument Second Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ2222**Jazz Violin Secondary Instrument Second Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ2223**Jazz Guitar Secondary Instrument Second Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ2224**Electric Bass Secondary Instrument Second Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ2225**Jazz Flute Secondary Instrument Second Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ2226**Jazz Saxophone Secondary Instrument Second Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ2229**Jazz Percussion Drum Set Secondary Instrument 2 Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVJ2320**Jazz Piano Principal Instrument Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ2321**Jazz Voice Principal Instrument Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ2322**Jazz Violin Principal Instrument
Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ2323**Jazz Guitar Principal Instrument
Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ2324**Electric Bass Principal Instrument
Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ2326**Jazz Saxophone Principal Instrument
Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ2327**Jazz Trumpet Principal Instrument
Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ2328**Jazz Trombone Principal Instrument
Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVJ2329**Jazz Percussion Drum Set Principal
Instrument 2 yr.****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVK1011**Pre-Applied Piano
2.00 credits**

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVK1012**Pre-Applied Harpsichord
2.00 credits**

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVK1013**Pre-Applied Organ
2.00 credits**

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVK1111**Class Piano 1
1.00 credits**

The secondary area of piano with emphasis on sight-reading, melody harmonization, and ensemble playing. Required of all music students except piano majors. May be repeated for credit. (2 hrs. per week)

MVK1112**Class Piano 2
1.00 credits**

A continuation of MVK 1111. Prerequisite: MVK 1111 or placement by exam. (2 hr. lab)

MVK1211**Piano Secondary Instrument First
Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVK1212**Harpsichord Secondary Instrument
First Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVK1213**Organ Secondary Instrument First
Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVK1311**Piano Principal Instrument First Year
2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVK2121**Class Piano 3
1.00 credits**

Further development of elementary keyboard techniques and musicianship,

enhancing skills previously developed. Prerequisite MVK 1112 or placement by exam. (2 hr. lab)

MVK2122**Class Piano 4****1.00 credits**

A continuation of MVK 2121. Prerequisite MVK 2121 or placement by exam. May be repeated for credit. (2 hr. lab)

MVK2221**Piano Secondary Instrument Second Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVK2222**Harpichord Secondary Instrument Second Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVK2223**Organ Secondary Instrument Second Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVK2321**Piano Principal Instrument Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVK2322**Harpichord Principal Instrument Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVO1214**Recorder Secondary Instrument First Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVP1011**Pre-Applied Percussion****2.00 credits**

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVP1211**Percussion Secondary Instrument First Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVP1311**Percussion Principal Instrument First Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVP2221**Percussion Secondary Instrument Second Year****1.00 credits**

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVP2321**Percussion Principal Instrument Second Year****2.00 - 3.00 credits**

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVS1011**Pre-Applied Violin****2.00 credits**

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVS1012**Pre-Applied Viola****2.00 credits**

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVS1013**Pre-Applied Cello****2.00 credits**

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVS1014**Pre-Applied String Bass****2.00 credits**

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVS1015
Pre-Applied Harp
2.00 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVS1016
Pre-Applied Guitar
2.00 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVS1017
Pre-Applied Bass Guitar
2.00 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVS1211
Violin Secondary Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVS1212
Viola Secondary Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVS1213
Cello Secondary Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite:

Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVS1214
Bass Secondary Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVS1216
Guitar Secondary Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVS1311
Violin Principal Instrument First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVS1312
Viola Principal Instrument First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVS1313
Cello Principal Instrument First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite:

Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVS1314
Bass Principal Instrument First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVS1315
Harp Principal Instrument First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVS1316
Guitar Principal Instrument First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVS2223
Cello Secondary Instrument Second Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVS2224
Bass Secondary Instrument Second Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite:

Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVS2225

Harp Secondary Instrument Second Year

1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVS2226

Guitar Secondary Instrument Second Year

1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVS2321

Violin Principal Instrument Second Year

2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVS2322

Viola Principal Instrument Second Year

2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVS2323

Cello Principal Instrument Second Year

2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken

in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVS2324

Bass Principal Instrument Second Year

2.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVS2326

Guitar Principal Instrument Second Year

2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVV1011

Pre-Applied Voice

2.00 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVV1111

Voice Class

1.00 credits

Designed for non-music students providing class instruction in the elective area of voice. Prerequisite: MUE 1430. May be repeated for credit. (2 hrs. per week)

MVV1211

Voice Secondary Instrument First Year

1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVV1311

Voice Principal Instrument First Year

2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVV2221

Voice Secondary Instruments Second Year

1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVV2321

Voice Principal Instrument Second Year

2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW1011

Pre-Applied Flute

2.00 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVW1012

Pre-Applied Oboe

2.00 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVW1013

Pre-Applied Clarinet

2.00 credits

Private instrumental for those music students who are not prepared to perform at

the college music major level. Special fee. (1 hr. per week)

MVW1014
Pre-Applied Bassoon
2.00 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVW1015
Pre-Applied Saxophone
2.00 credits

Private instrumental for those music students who are not prepared to perform at the college music major level. Special fee. (1 hr. per week)

MVW1211
Flute Secondary Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW1212
Oboe Secondary Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW1213
Clarinet Secondary Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW1215
Saxophone Secondary Instrument First Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW1311
Flute Principal Instrument First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW1312
Oboe Principal Instrument First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW1313
Clarinet Principal Instrument First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW1314
Bassoon Principal Instrument First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW1315
Saxophone Principal Instrument First Year
2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW2221
Flute Secondary Instrument Second Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW2223
Clarinet Secondary Instrument Second Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW2224
Bassoon Secondary Instrument Second Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW2225
Saxophone Secondary Instrument Second Year
1.00 credits

Private instruction in a secondary instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1/2 hr. per week)

MVW2321
Flute Principal Instrument Second Year

2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW2322
Oboe Principal Instrument Second Year

2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW2323
Clarinet Principal Instrument Second Year

2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

MVW2325
Saxophone Principal Instrument Second Year

2.00 - 3.00 credits

Private instruction in a principal instrument or voice. Required each term for music majors. Courses in each area must be taken in sequence. Prerequisite: Departmental approval. Special fee. May be repeated for credit. (1 hr. per week)

Nuclear Medicine

NMT1002
Introduction to Nuclear Medicine
2.00 credits

This course is designed to provide an introduction to the field of Nuclear Medicine. Students will learn about the history of the profession, terminology, hospital and patient safety, infection control, patient

assessment, accessing and utilizing the patients' medical record, critical thinking, Nuclear Medicine protocols, and patient education. Prerequisites: CHM 1033, 1033L; co-requisite: NMT 1002L. (2 hr. lecture)

NMT1002L
Introduction to Nuclear Medicine Laboratory
1.00 credits

The student will learn the fundamentals of clinical nuclear medicine before going to the hospital and/or clinical site for actual patient interaction. The student will be introduced to radio-pharmacology, radiopharmaceutical chemistry, and characterization of radiopharmaceuticals, localization, and FDA approval process. Prerequisites: CHM1033, 1033L. Corequisites: NMT 1002, 1312, 2613. (2 hr. lab)

NMT1312
Radiation Protection
2.00 credits

This course covers all local, state and federal regulations related to Nuclear Medicine. Students will learn the appropriate protection procedures to limit exposure, the performance of area surveys and wipe tests, the proper decontamination procedures, the disposal of radioactive waste procedures, and personnel monitoring of radiation exposure. Corequisites: NMT 1002L, 1002, 2613. (2 hr. lecture)

NMT1713
Nuclear Medicine Procedures 1
2.00 credits

This course will include the imaging parameters necessary to obtain images for the basic procedures performed in a Nuclear Medicine department. Students will learn about imaging procedures related to the following systems: skeletal, central nervous, cardiovascular genitourinary, respiratory and gastrointestinal. Instrumentation necessary to produce the required images as well as patient management during the procedures will be addressed. Prerequisites: BSC 2085, 2085L, 2086, 2086L, CHM1033, 1033L; corequisites: NMT 2130, 2534, 2804C. (2 hr. lecture)

NMT2102
Nuclear Medicine Administration
2.00 credits

The student will learn the administrative duties required of a nuclear medicine technologist. Areas covered include patient scheduling, radioisotope ordering; scheduling and testing; communication; patient and clinician satisfaction. Prerequisites: NMT 2130, 2534; corequisites: NMT 2723, 2573, 2814C. (2 hr. lecture)

NMT2130
Nuclear Medicine Pharmacology
2.00 credits

Students will learn how to maintain radiopharmaceutical laboratory records and materials, obtain a generator equate, prepare radiopharmaceuticals and perform quality control tests, as well as dispose of radioactive waste appropriately. The ordering of pharmaceuticals in appropriate dosage and effective time frames will also be included. Prerequisites: NMT 1002, 1002L, 1312, 2613; corequisites: NMT 1713, 2534, 2804C. (2 hr. lecture)

NMT2534
Nuclear Medicine Instruction
2.00 credits

This course will integrate and correlate the principles of electrical and nuclear physics associated with the operation and calibration of radiation detection devices employed in nuclear medicine. The student will learn the various types of devices that are used to provide information from which the diagnostic images are obtained. Prerequisites: NMT 1002, 1002L, 1312, 2613 and PHY1004; corequisites: NMT 1713, 2130, 2804C. (2 hr. lecture)

NMT2573
Nuclear Medicine QA/QC
2.00 credits

The student will learn to perform quality assurance and quality control testing of imaging systems; calibrate and operate scintillation counters; calibrate and operate gas-filled detectors; and perform quality assurance testing of routine imaging and assay procedures. Prerequisites: NMT 1713, 2534, 2613; co-requisites: NMT 2102, 2814C, 2723. (2 hr. lecture)

NMT2613
Nuclear Medicine Physics
2.00 credits

Students will learn the basic concepts of atomic, nuclear and radiation physics with an emphasis on the interactions of radiation with matter. Alpha, beta, and gamma sources are explained in this course. Prerequisites: MAC 1105, PHY 1004; corequisites: NMT 1002, 1002L, 1312. (2 hr. lecture)

NMT2723
Nuclear Medicine Procedures 2
2.00 credits

A continuation of Nuclear Medicine Procedures 1, students will learn the imaging parameters necessary to obtain images as well as the use of instrumentation necessary to produce the required images performed in a nuclear medicine department. Exposure to patient management during the procedures will also be addressed. Prerequisites: NMT 1713, 2804C; corequisites: NMT 2573, 2814C. (2 hr. lecture)

NMT2804C
Nuclear Medicine Clinic Practice & Conference 1
6.00 credits

This course will introduce the student to the fundamentals of clinical nuclear medicine primarily through hospital involvement. The student will learn practical experience in a Nuclear Medicine department by performing the principles taught in class. Prerequisites: NMT 1002L, 1002, 1312, 1713. (21 hr. clinic)

NMT2814C
Nuclear Medicine Clinic Practice & Conference 2
6.00 credits

This course is a continuation of NMT 2804C Clinic1 and will provide the student the opportunity to participate in the fundamentals of clinical nuclear medicine in the hospital involvement. The student will learn practical experience in a Nuclear Medicine department by performing the principles taught in class. Prerequisites: NMT 2804C, 2130, 2534, 2613. (21 hr. clinic)

NMT2824C
Nuclear Medicine Clinic 3
7.00 credits

This is the final course in the series of three clinical courses. Students will learn to apply all didactic competencies in the Nuclear Medicine department setting, as well as perform all procedures from the two Nuclear Medicine Procedures courses with minimal supervision. The ARRT Competency Requirements must be completed in this course. Prerequisites: NMT 2814C. (24.5 hr. clinic)

NMT2932
Nuclear Medicine Seminar
2.00 credits

The student will learn to incorporate all theory related to the production of a nuclear medicine image. The student will also learn about radiation protection, instrumentation, physics, pharmacology, and Quality Assurance/Quality Control. Prerequisites: NMT 1312, 2534, 2573, 2613; co-requisite: NMT2824C. (2 hr. lecture)

Nursing

NSP3685
End-of-Life Nursing Care
3.00 credits

The purpose of this course is to provide healthcare professionals an overview of End-of-Life palliative and hospice care. Students will learn pain and symptom management, ethical and cultural considerations, assess psychosocial and emotional concerns of the patient and family, and describe the care of the patient during the last hours. Course is restricted to BSN students, requires departmental permission. (3 hr. lecture)

NUR1002
Transition to Professional Nursing
6.00 credits

This course introduces students with prior healthcare education to the nursing profession, nursing role, nursing process and the implementation of health-promoting activities to meet patient needs. Students will learn the nurse's role in meeting short and long term needs of the patient through preventive, therapeutic and palliative care.

Students will also explore nursing care of the adults with moderate alterations in health within a body systems framework. Prerequisite: Admission to the School of Nursing. Co-requisites: NUR 1002L, 1142. Special fee. (6 hr. lecture)

NUR1002L
Transition to Professional Nursing Laboratory
4.00 credits

This lab introduces students with prior health care education to the nursing profession. Students will learn the nurse's role in meeting short and long term needs of the patient through preventive, therapeutic and palliative care. Students will also explore nursing care of the adults with moderate alterations in health within a body systems framework. Prerequisite: Program Admission; co-requisites: NUR 1002, 1142. (8 hr. lab)

NUR1025
Fundamentals of Nursing
3.00 credits

This course provides an introduction to the nursing profession. Students will learn the roles basic to nursing practice, nursing process, and how nurses are involved in health promoting activities to meet client needs. Prerequisite: Program Admission; co-requisites: NUR 1025C, 1060C, and 1142. Special fee. (3 hr. lecture)

NUR1025C
Fundamentals of Nursing Skills Lab
2.00 credits

Students will learn of the opportunities for the explanation, demonstration, and practice of care provider activities essential to the basic practice of nursing. Learning experiences are provided in the skills laboratory. Prerequisite: Program Admission; corequisites: NUR 1025, 1060C, 1142. Special fee. (1 hr. lecture; 2 hr. lab)

NUR1025L
Fundamentals of Nursing Clinical Lab
2.00 credits

This course provides an introduction to the profession of nursing. Students will learn the roles basic to nursing practice and opportunities to apply the nursing

process in selected clinical experiences. The emphasis is on health promoting activities to meet client needs in a variety of settings including community based experiences. Prerequisite: Program Admission; corequisites: NUR 1025. Special fee. (6 hr. clinical lab)

NUR1060C
Adult Health Assessment
2.00 credits

This course is designed to provide students with the necessary skills to perform an in-depth nursing history and a complete physical examination on an adult client. The focus will be on clients with minimal or no alterations in their health state. Students will be introduced to and will demonstrate the techniques used in physical examination. Prerequisite: Admission to the School of Nursing; Corequisites: NUR 1025, 1025L, 1142. Special fee. (2 hr. lecture)

NUR1141
Nursing Math & Pharmacology
2.00 credits

Students will learn about medications and their effects on different body systems. The conceptual and mathematical operations necessary for safe and effective administration of intravenous medications, preparing medications that come in powdered form and adjusting medication administration based on medical protocols are discussed. Prerequisites: NUR 1025, 1025C, 1025L, 1060C, 1142; corequisites: NUR 1211, 1211L. (2 hr. lecture)

NUR1142
Introduction to Nursing Math & Pharmacology
1.00 credits

Students will learn concepts of medications including history, nomenclature, sources of drug information, federal drug laws and standards, medication classifications, pharmacokinetics, pharmacodynamics, variables affecting medication actions and effects, and methods of delivery. Prerequisites: Program Admission; corequisites: NUR 1025, 1025C, 1060C or NUR 1002, 1002L. (1 hr. lecture)

NUR1211
Medical-Surgical Nursing
4.00 credits

This course provides an introduction to the adult nursing care. Students will learn the nurse's role in meeting the short and long term needs of the client and community through preventive, therapeutic and palliative care are discussed. Prerequisites: NUR 1025, 1025C, 1060C, 1142; corequisites: NUR1211L, 1214C. Special fee. (4 hr. lecture)

NUR1211L
Medical Surgical Nursing Clinical Lab
4.00 credits

Students will learn how to apply concepts of adult health nursing. Experiences in both in-patient and community settings will be provided. Students are encouraged to participate in projects emphasizing preventive aspects of nursing care. Prerequisites: NUR 1025, 1025C, 1025L, 1060C, 1142; corequisites: NUR 1211, 1214C. Special fee. (192 Hr. Clinical Lab)

NUR1214C
Medical Surgical Nursing Skills Lab
1.00 credits

Students will learn the opportunities for the explanation, demonstration, and practice of skills related to adult health nursing. Learning experiences are provided in the School of Nursing Skills Laboratory. Prerequisites: NUR 1025, 1025C, 1025L, 1060C, 1142; corequisites: NUR 1211, 1211L. Special fee. (.5 hr. lecture; 1 hr. lab)

NUR2212
Advanced Medical-Surgical Nursing
3.00 credits

This course explores the medical surgical nursing care of clients with complex alterations in health. Students will learn advanced concepts in medical surgical nursing which is discussed within a body systems framework focusing on the nurse's role in meeting the needs of the client, family, and community. Prerequisites: NUR 2310, 2310L, 2420, 2420L, 2680L; corequisites: NUR 2212L. Special fee. (3hr. lecture)

NUR2212L
Advanced Medical-Surgical Nursing Clinical
3.00 credits

This course provides students with the opportunity to apply advanced concepts of medical surgical nursing. Students will learn to provide health care delivery in both in-patient and community settings. Students will focus on the nurse's role in meeting the needs of the client, family and community. Students are encouraged to actively participate in projects assisting clients in preventive care and maintenance of health. Prerequisites: NUR 2310, 2310L, 2420, 2420L, 2680L; Corequisites: NUR 2212. Special fee. (144 hr. clinical)

NUR2310
Pediatric Nursing
2.00 credits

This course provides a family centered approach to the nursing care of pediatric clients and their families. Students will learn the nurse's role in meeting the short and long term needs of the pediatric client, family, and community through preventative, therapeutic and palliative care, with recognition for the multicultural aspects of client needs. Prerequisites: 1211, 1211L, 1214C or 1002, 1002L; 1142; corequisites: NUR 2310L, 2420, 2420L, 2680L. Special fee. (2 hr. lecture)

NUR2310L
Pediatric Nursing Clinical Lab
1.00 credits

This course allows the student to apply the nursing process to the care of clients in selected pediatric clinical settings. Students will learn to observe cultural diversity and implement care to the pediatric client, family, and community through preventive, therapeutic and palliative measures. Prerequisites: NUR 1211, 1211L, 1214C or 1002, 1002L; 1142. Corequisites: NUR 2310, 2420, 2420L, 2680L. Special fee. (48 hr. Clinical)

NUR2420
Obstetrical Nursing
2.00 credits

This course provides a family centered approach to the nursing care of obstetri-

cal clients and their families. Students will learn to assess the pregnant client, to implement caring behaviors for the laboring client, educate the postpartum client, and manage the care of the newborn and collaboration of care for the high risk client. Prerequisites: NUR1211, 1211L, 1214C or 1002, 1002L, 1142. Corequisites: NUR 2310, 2310L, 2420L, 2680L. Special fee. (2 hr. lecture)

NUR2420L
Obstetrical Nursing Clinical Lab
1.00 credits

This course provides an introduction to obstetrical nursing clinical practice. Students will learn to apply the nursing process to the care of clients in selected obstetrical clinical settings. Prerequisites: NUR 1211, 1211L, 1214C or 1002, 1002L; 1142. Corequisites: NUR 2310, 2310L, 2420, 2680L. Special fee. (48 hr. clinical)

NUR2520
Psychiatric Nursing
2.00 credits

This course introduces students to the basic concepts of psychiatric nursing. Students will learn to provide care in in-patient and community settings, focusing on the nurse's role in meeting the needs of the patient, family, and the community. Prerequisites: NUR 1211, 1211L, 1214C or 1002, 1002L; 1142. Co-requisites: NUR 2520L. Special fee. (2 hr. lecture)

NUR2520L
Psychiatric Nursing Clinical Lab
2.00 credits

This course provides the student opportunities to apply concepts of psychiatric nursing. Students will learn psychiatric procedures for both in-patient and community settings, focusing on the nurse's role on meeting the needs of the client, family, and community. Students actively participate in projects assisting clients in preventative care and maintenance of mental health. Prerequisites: NUR 1211, 1211L, 1214C or 1002, 1002L; 1142. Co-requisites: NUR 2520. Special fee. (96 hr. clinical)

NUR2680L
Community Health Nursing Lab
1.00 credits

This laboratory course assists the students in applying knowledge of community health resources. Students will learn to manage community health resources to support the delivery of care to the childbearing/child-rearing families. Special emphasis is placed on the understanding of cultural influences on the health practices and beliefs within the family. Prerequisites: NUR 1211, 1211L, 1214C or 1002, 1002L; co-requisites: NUR 2310, 2310L, 2420, 2420L.0L. Special fee. (48 hr. clinical)

NUR2811C
Professional Nursing Leadership
4.00 - 5.00 credits

This course provides the student with the theoretical and clinical knowledge necessary for actualization of the role of the registered professional nurse. Students will learn how to apply the role of the registered nurse with emphasis on delegation and supervision. Prerequisites: NUR 2310, 2310L, 2420, 2420L, 2680L. Laboratory fee. (2 hr. lecture 9 hr. lab)

NUR3045
Culture in Nursing Practice
3.00 credits

This course focuses on the use of the nursing process to provide culturally competent health care, including assessing and identifying cultural practices, values and beliefs that affect nursing practice. The student will be introduced to the components of cultural competence, which includes awareness, sensitivity, and brokering interventions. This course will incorporate culturally relevant planning, implementation and evaluation. Minimum grade of "C" or better required. Corequisite: NUR 3805 (3hr. lecture)

NUR3069
Advanced Health Assessment
3.00 credits

This course will focus on the assessment of individuals, families, and culturally diverse communities throughout the life span. The course will also include relevant theories, evidenced based practice concepts for the

comprehensive assessment and management of health throughout the family life cycle. The course includes lecture, discussion and demonstration of history-taking and an integrated physical assessment. Minimum grade of "C" or better required. Corequisite NUR 3846. (3 hr. lecture)

NUR3165
Nursing Research
3.00 credits

This course provides a basic understanding of the steps and processes of qualitative and quantitative nursing research, with an emphasis on the development of the basic skills of analyzing research findings and how they can be incorporated and applied to clinical practice. Ethical and theoretical issues will be discussed. Minimum grade of "C" or better required. Prerequisite: Admission to the program. (3 hr. lecture)

NUR3178
Complementary and Alternative Health Care
3.00 credits

This is an upper division course in complementary and alternative healthcare. Students will learn holistic aspects of care while evaluating complementary and alternative healthcare in diverse populations across the lifespan and around the globe. The course addresses different complementary and alternative treatment practices through evidence-based research. (3 hr. lecture)

NUR3289
Foundations of Gerontology
3.00 credits

This course focuses on the special health-care needs of the geriatric population. Students will learn the physical, physiological, psychosocial and gero-pharmacologic implications related to aging. The trends in the changing demographics and the social consequences of aging will be identified. Established geriatric assessment and evaluative tools will also be discussed. Prerequisite: Admission to the BSN - RN program N9100. (3 hr. lecture)

NUR3674**Faith Based Community Nursing
3.00 credits**

This course will provide education in faith-based community nursing to registered nurses. Students will learn the skills needed to integrate the care of mind, body, and spirit in faith-based communities. The intentional care of the spirit is part of the process in preventing and minimizing illness in a faith-based community. Prerequisite: RN with at least 2 years of experience and baccalaureate degree standing. Departmental permission required. (3 hr. lecture)

NUR3805**Transition to Professional Nursing
3.00 credits**

This course focuses on the transition of nursing students from an associate degree program to the role of the BSN nursing graduate. The BSN role builds on concepts and experiences previously introduced. The history and evolution of the nursing profession, ethical imperatives, and current trends and issues impacting professional practice in an evolving healthcare delivery environment are foundations for the development of the professional nurse. The role of the BSN prepared graduate focuses on utilization of evidenced-based nursing practices and advanced leadership and management skills in a variety of settings within a global community. Minimum grade of "C" or better required. Corequisite: NUR 3045. (3 hr. lecture)

NUR3826**Ethical Issues in Health Care and the Environment
3.00 credits**

This course is designed to acquaint students with current ethical issues in health care and the environment. Students will learn to analyze issues/dilemmas using ethical decision making models. Students will learn the process involved in advocating for change in the health care setting and the global environment. Prerequisites: PHI 2604 or NUR 3041. (3 hr. lecture)

NUR3846**Foundations of Professional Nursing
3.00 credits**

This course explores the evolution of professional nursing knowledge and theories. Concepts are analyzed in relation to conceptual theoretical frameworks within Nursing. Students will integrate philosophies and theories in the delivery of healthcare and theories are introduced as a foundation for the delivery of healthcare in a multicultural/global environment. Minimum grade of "C" or better required. Corequisite: NUR 3069. (3 hr. lecture)

NUR4636**Community Health Nursing
3.00 credits**

This course focuses on the holistic aspects of community nursing care applied to diverse global populations across the lifespan. The course introduces students to community nursing practice and formulates a paradigm shift from individual patient's to the global community, addressing the history, evolution, theoretical framework, and purpose of community health nursing practice with an introduction to epidemiological principles, concepts of community assessment, health promotion, maintenance and education. The course involves the analysis of current knowledge and practice to illness prevention, health promotion, health restoration, community education and empowerment. Minimum grade of "C" or better required. Prerequisite: NUR 3069, 3805; corequisite: NUR 4636L. (3 hr. lecture)

NUR4636L**Community Health Nursing Practicum
3.00 credits**

This course focuses on the clinical application of Community Health Nursing Theory. Students will utilize the nursing process in the delivery of healthcare within the community environment. Students will assess the individual, family, and/or community, develop a plan of care, and deliver care to an individual, family and/or community within a multicultural environment. Minimum grade of "C" or better required. Corequisite: NUR 4636. (144 hr. Practicum)

NUR4667**Globalization of Nursing Practice
3.00 credits**

This course focuses on world health issues that influence international health practices with an emphasis on preparing the professional nurse to become a major contributor to the international healthcare team. The course will include economic, political, social, and demographic issues that affect health care systems of select countries and address the role of nurses in the delivery of global health care. Minimum grade of "C" or better required. Prerequisite: NUR 3069, 3805; corequisite: NUR 4827. (3 hr. lecture)

NUR4827**Leadership and Management Theory
3.00 credits**

This is an introductory course to leadership and management concepts and theories needed in today's health care environment. The course focuses on unique and innovative approaches to delegation, decision-making, budgeting, quality improvement, evidence-based practice, and population-based practice. Minimum grade of "C" or better required. Corequisite: NUR 4667. (3 hr. lecture)

NUR4945C**Advanced Concepts Practicum
3.00 credits**

This course is a capstone of prior learning, including evidenced-based interventions, theoretical concepts, and critical thinking skills, with an emphasis on the application to professional nursing practice. The focus is on multicultural populations which are experiencing physical, psychological, social, or spiritual imbalances. The student, working with a preceptor, will facilitate the delivery of health care to diverse cultures in various specialized settings. Prerequisites: Minimum grade of "C" or better required, NUR 4636, NUR 4667. (96 hr. practicum)

Nutrition

HUN1012
Nutritional Counseling
3.00 credits

Basic principles of nutrition of an optimum diet for building and maintaining sound teeth and body tissues. Emphasis is placed on nutritional counseling. (3 hr. lecture)

HUN1201
Essentials of Human Nutrition
3.00 credits

The Essentials of Human Nutrition is a general education course designed to acquaint students with the specific role of carbohydrates, fats, proteins, vitamins, minerals, and water in daily life. Students will learn how the human body systems manage the breakdown, assimilation, and excretion of nutrients and their metabolic wastes. Students will also learn the relationships between food and optimal health including physical fitness and the relationships between nutritional imbalances and diseases. (3 hr. lecture)

Oceanography

OCE1001
Introduction to Oceanography
3.00 credits

The oceans, their nature and extent. The causes and effects of waves and current; biology of sea life; geology of the sea floor, erosion and bottom deposits and related meteorological and economic effects. (3 hr. lecture)

OCP3002
Survey of Oceanography
3.00 credits

This course explores the ocean origin, physical properties, salinity, temperature, sound, radiative properties, heat budget and climatic controls, tides, wind-driven motion, monsoon circulation, El Nino phenomenon, subsurface water masses, oceanic circulation and paleoclimates. This course is designed for upper level students pursuing a BS in Science Education. Prerequisites: GLY 1010, OCE1001; Corequisite: OCP 3002L. (3 hr. lecture)

OCP3002L
Survey of Oceanography Laboratory
1.00 credits

A laboratory course designed to give students hands-on knowledge of specific concepts discussed in OCP 3002. (2 hr. lab)

Office Technology

OST2335
Business Writing
3.00 credits

Covers the procedures for writing effective business letters and memorandums, a review of grammar, and the proper format of today's business correspondence. Students learn how to prepare inquiry letters, direct and indirect response letters, application letters and resumes, and short reports. Prerequisite: OST 1330. (3 hr. lecture)

Paralegal

PLA1949
Co-op Work Experience 1: PLA
3.00 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. Prerequisite: 2.0 GPA, approval of Co-op Director, and a minimum of 6 credits in field or approved work experience. (3 hr. lecture)

PLA2003
Fundamentals of Law
3.00 credits

This course provides students with an overview of the American legal system. It explores the basic concepts of law in society including the different sources of law. The federal, state and county court systems are examined along with judicial interpretation of the law. The course also covers the distinctions between procedural

and substantive law, civil versus criminal and a court of equity and a court of law. The roles of paralegals are discussed with an emphasis given in their professional relationships, functions, career opportunities and ethical obligations. Prerequisite: ENC 1101. Special fee. (3 hr. lecture)

PLA2104
Legal Research
3.00 credits

This course provides students with an understanding of the process of legal analysis. Student's will become familiar with research materials, tools, strategies, and learn how to locate research sources in a traditional law library. Prerequisite: PLA 2003. Special fee. (3 hr. lecture)

PLA2114
Legal Writing
3.00 credits

This course provides knowledge and understanding of how to present legal research and analysis in proper written format. As legal research is an integral part of legal writing, the course will reinforce the skills used in legal research. It will also cover basic writing skills, the process of legal analysis, methodology involved in drafting a Memorandum of law, practice in drafting pleadings, and various types of specific law office correspondence. Prerequisites: ENC 1101, PLA 2003, 2104. (3 hr. lecture)

PLA2203
Trial Preparation
3.00 credits

Trial Preparation focuses on the role of the paralegal in litigation and involves knowledge of the rules of civil procedure and the preparation and use of various written instruments utilized throughout the trial process. Prerequisites: PLA 2104, 2114. Special fee. (3 hr. lecture)

PLA2223
Trial Practice & Appeals
3.00 credits

Trial Practice and Appeals examines the differences between jury and bench trials, the trial process, and the role of the litigation paralegal who assists the attorney in the

preparation for trial. Prerequisites: PLA 2114, 2203. Special fee. (3 hr. lecture)

PLA2273

Torts

3.00 credits

This course provides an examination of the theories governing tort law and the use of various pre-litigation tools. Topics covered include intentional torts, negligence and strict liability. The course also requires students to utilize the knowledge obtained to draft documents employed in practice. Prerequisites: PLA 2114, 2203. Special fee. (3 hr. lecture)

PLA2303

Criminal Law & Litigation

3.00 credits

This course focuses on the substantive areas of criminal law including the offenses, elements, defenses and parties to a criminal law proceeding. It also emphasizes the role of the criminal justice system in adjudicating, enforcing and sentencing criminal defendants. It examines the Florida Rules of Criminal Procedure and provides practice in drafting documents required in the conduct of a criminal trial. Prerequisites: PLA 2114, 2203. Special fee. (3 hr. lecture)

PLA2600

Wills, Trust, Estate

3.00 credits

Wills, Trusts, and Estates is a study of the laws governing wills and interstate succession. The course provides practice in drafting a simple will and trust. It also examines the procedures and rules involved in probate administrations and explains the ethical obligations of attorneys and paralegals who are involved in this area of practice. Prerequisites: PLA 2114, 2203, REE 2040. Special fee. (3 hr. lecture)

PLA2763

Law Office Management

3.00 credits

A survey of economical and efficient law office practices and procedures including the proper use of law office equipment; business data processing law office management, personnel selection, training and management; employer/employee rela-

tionships; correct utilization of time and space; correct time keeping and billing procedures. Prerequisites: PLA 2114, 2203. Special fee. (3 hr. lecture)

PLA2800

Family Law

3.00 credits

An examination of the legal aspects of domestic relations. This course focuses upon dissolution of marriage law with emphasis on pleadings, discovery, and property settlements. Other areas of family law such as adoption and annulment will be reviewed. Prerequisites: PLA 2114, 2203. (3 hr. lecture)

PLA2931

Legal Specialty Seminars

1.00 credits

Intensive practical and theoretical training is provided in a seminar format. The seminar topics cover current and timely legal issues and are addressed by practicing attorneys. The topics are announced at the beginning of the fall and winter semesters. Corequisite: PLA 2003 with a grade of "C" or better. (1 hr. lecture)

PLA2932

Legal Specialty Seminar Laboratory

1.00 credits

Intensive practical and theoretical training is provided in a seminar format. The seminar topics cover current and timely legal issues and are addressed by practicing attorneys. The topics are announced at the beginning of the fall and winter semesters. Corequisite: PLA 2104 with a grade of "C" or better. (1 hr. lecture)

PLA2933

Legal Specialty Seminars

1.00 credits

Intensive practical and theoretical training is provided in a seminar format. The seminar topics cover current and timely legal issues and are addressed by practicing attorneys. The topics are announced at the beginning of the fall and winter semesters. Prerequisite: REE 2040 with a grade of "C" or better. (1 hr. lecture)

PLA2934

Legal Specialty Seminars

1.00 credits

Intensive practical and theoretical training is provided in a seminar format. The seminar topics cover current and timely legal issues and are addressed by practicing attorneys. The topics are announced at the beginning of the fall and winter semesters. Prerequisites: PLA 2003, 2104, 2114. (1 hr. lecture)

PLA2935

Legal Specialty Seminars

1.00 credits

Intensive practical and theoretical training is provided in a seminar format. The seminar topics cover current and timely legal issues and are addressed by practicing attorneys. The topics are announced at the beginning of the fall and winter semesters. Prerequisites: PLA 2003, 2104, 2114. (1 hr. lecture)

PLA2940

Legal Assisting Internship

1.00 - 3.00 credits

Prerequisite: Permission of the Program Director.

Philosophy and Logic

PHI1100

Introduction to Logic

3.00 credits

This is a foundation course in philosophy. Students will learn the basic principles of valid reasoning, and practice in the application of various techniques of analysis. (3 hr. lecture)

PHI2010

Introduction to Philosophy

3.00 credits

This is a foundation course in philosophy. Students will learn about topics such as epistemology, metaphysics and ethics. The course introduces the methods of philosophy, addresses some major philosophical questions and examines the views of various philosophers from around the world. Prerequisite: ENC 1101. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

PHI2070
Introduction to Eastern Philosophy
3.00 credits

This is a foundation course in philosophy. Students will learn various philosophies of the East. Philosophers from various traditions such as Buddhism, Confucianism, Hinduism and Taoism will be discussed and analyzed. (3 hr. lecture)

PHI2604
Critical Thinking and Ethics
3.00 credits

This is a foundation course in philosophy. Students will learn critical thinking skills and will study major theories of ethics. Students will use methods of effective reasoning to reflect critically upon their values, ethical standards, and the ethical permissibility of topics such as euthanasia, animal rights, and environmental ethics. Prerequisite: ENC 1101 (3 hr. lecture)

PHI280
Aesthetics
3.00 credits

This course is designed to introduce students to philosophy of art and aesthetics. Students will learn critical terminology; historical and contemporary aesthetic theories; and the practical application of critical approaches to art criticism. (3 hr. lecture)

PHM2300
Political Philosophy
3.00 credits

This is a foundation course in philosophy. Students will learn major political theories by examining the ideas of various political philosophers. In order to evaluate the policies and practices of contemporary societies, basic philosophical concepts which underlie modern societies such as rights, duties, legal obligations, and freedoms will be discussed and analyzed. (3 hr. lecture)

Photography

PGY2110C
Color Photography 1
3.00 - 4.00 credits

An introductory course in the making of Type C photographic prints, including the

darkroom techniques of developing color film, color filtering, color balance and density control. There will be an exploration of significant contributions to the aesthetics of color photography. Students must provide their own cameras, film and photographic paper. Prerequisite: PGY 2401C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

PGY2111C
Color Photography 2
4.00 credits

Deals primarily with printing methods used in printing color negatives. Concentrated practice is given in light, color balancing, exposure and processing of color printing materials; the techniques of producing matched multi-size prints are demonstrated. Prerequisite: PGY 2110C. Laboratory fee. (1-2 hr. lecture; 4 hr. lab)

PGY2112C
Color Photography 3
4.00 credits

An introduction to the use of the view camera to explore the problems of form and content in large format color photography. View camera will be provided. Special fee. (1-2 hr. lecture; 4 hr. lab)

PGY2211
Portrait and Still Photography
4.00 credits

Fundamentals of portrait and still photography are presented. Basic and advanced exercises are taught in lighting, posing, make-up and camera angles. Composition, lighting and design functioning to describe people and objects for a variety of clients are explored. Prerequisite: PGY 2410C. (1-2 hr. lecture; 4 hr. lab)

PGY2222
Fashion Photography
4.00 credits

The production of commercially viable photographs illustrating clothes as desirable objects as well as recent trends in fashion industry are studied. An awareness of mood, make-up, and dramatic impact is stressed. (1-2 hr. lecture; 4 hr. lab)

PGY2238
Illustrative Photography 1
4.00 credits

The use of the camera to illustrate either an original concept or a concept provided by an art director for clients such as magazines, manufacturing concerns, advertising agents, newspapers, technical publications and schools. The creative approach is stressed in planning and production-effective color and black/white illustrations. Prerequisite: PGY 2410C. Laboratory fee. (1-2 hr. lecture; 4 hr. Lab)

Physical Education

HLP1080
Wellness
2.00 credits

This course enables students to assess their present aerobic fitness level, lung capacity, percentage of body fat, flexibility and strength. From data collected, the student will be able to set personal wellness goals. Lectures, demonstrations, and multi-media materials will be used to provide the scientific basis for meeting one's personal wellness goals. (2 hr. lecture/lab)

HLP1081
Fitness & Wellness for Life
3.00 credits

In this course students will learn the roles of exercise, physical activity, diet, and stress management in achieving optimal wellness. Students will explore current developments in health and complete lab assignments, which will assist in the determination of their current health status. Individualized exercise and dietary protocols based on these assessments will be developed. Special fee. (3 hr. lecture/lab)

HLP1083
Weight Management
3.00 credits

This course is designed for students to develop an understanding of the role of exercise and nutrition as it applies to the implementation of a weight management plan. (3 hr. lecture)

PEO2321**Skills and Practices in Volleyball****2.00 credits**

Develops and analyzes the teaching and coaching of volleyball. This course also emphasizes skills and practices in volleyball. Special fee. (1 hr. lecture; 2 hr. lab)

PEO2621**Skills and Practices Basketball****2.00 credits**

Develops and analyzes the teaching and coaching of basketball. This course also emphasizes skills and practices of basketball. Special fee. (1 hr. lecture; 2 hr. lab)

PET1949**Co-op Work Experience 1: PET****3.00 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

PET2622C**Techniques of Athletic Training****3.00 credits**

Develops competence, knowledge and skill in the prevention and care of athletic injuries. A familiarization with the latest equipment, supplies, modalities and therapeutic aids is provided. Special fee. (2 hr. lecture; 2 hr. lab)

PET2949**Co-op Work Experience 2: PET****3.00 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op work experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must

contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

Physical Therapist Assistant

PHT1102C**Anatomy for the Physical Therapist Assistants****4.00 credits**

Regional description of the musculoskeletal landmarks utilized in implementing and documenting assessment and treatment procedures in physical therapy. Prerequisite: Departmental Approval, Corequisites: PHT 1201, PHT 1201L, PHT 1211, PHT 1211L. (3 hr. lecture and 2 hr. lab)

PHT1201**Introduction to Physical Therapy****2.00 credits**

Survey and history of the physical therapy profession. Role and responsibilities of the physical therapist assistant as they react with patients and other health care workers are discussed. Overview of common medical and surgical conditions treated in physical therapy is presented. Pre-Req BSC 2085, 2085L, PHY 1004, 1004L. Co-Req PHT 1102C, 1201L, 1211, 1211L (2 hr. lecture)

PHT1201L**Introduction to Physical Therapy****Laboratory****1.00 credits**

Basic patient care and treatment procedures which are typically required in a physical therapy service area. Treatment procedures include the proper administration of steam packs, cold packs, paraffin, whirlpool, and gait training. Pre-Req BSC 2085, 2085L, PHY 1004, 1004L Co-Req PHT 1102C, 1201, 1211, 1211L. Laboratory fee. (2 hr. lab)

PHT1211**Disabilities and Therapeutic Procedures 1****2.00 credits**

Cause and effect factors associated with selected orthopedic and neuromuscular disabilities. Pre-Req BSC 2085, 2085L, PHY 1004, 1004L. Co-Req PHT 1102C, 1201, 12010, 1211L (2 hr. lecture)

PHT1211L**Disabilities and Therapeutic Procedures 1 Lab****2.00 credits**

Laboratory practice of basic technical skills relating to electro-hydrotherapy, therapeutic exercise and patient care procedures. Pre-Req BSC 2085, 2085L, PHY 1004, 1004L. Co-Req PHT 1102C, 1201, 12010, 1211. Laboratory fee. (2 hr. lab)

PHT1949**Co-op Work Experience 1: PHT****3.00 credits**

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

PHT2120**Applied Kinesiology****2.00 credits**

Anatomical structures and movements as related to physical therapy procedures. Recognition and understanding of biomechanics of all human motion as related to the function of the musculoskeletal system during therapeutic exercise and gait training is discussed. Pre-Req BSC 2085, 2085L, PHT 1102C, 1201, 1201L, 1211, 1211L; Co-Req PHT 2120L, 2224, 2224L, 2801C.. (2 hr. lecture)

PHT2120L**Applied Kinesiology Laboratory****1.00 credits**

Procedures in measuring and analyzing muscle strength and function as related to the biomechanics of human motion. Pre-Req BSC 2085, 2085L, PHT 1102C, 1201, 1201L, 1211, 1211L; Co-Req PHT 2120, 2224, 2224L, 2801C. Laboratory fee. (2 hr. lab)

PHT2162**Survey of Neurological Deficits****3.00 credits**

Survey and description of clinical manifestations of neurological dysfunction

frequently treated in physical therapy. Pre-Req PHT 2120, 2120L, 2224, 2224L, 2801C. Co-Req PHT 2701, 2701L, 2810. (3 hr. lecture)

PHT2224
Disabilities and Therapeutic Procedures 2
3.00 credits

Cause and effect factors associated with the more complex medical and surgical problems resulting in disability. Pre-Req BSC 2085, 2085L, PHT 1102C, 1201, 1201L, 1211, 1211L; Co-Req PHT 2120, 2120L, 2224L, 2801C (3 hr. lecture)

PHT2224L
Disabilities and Therapeutic Procedures 2 Lab
2.00 credits

Laboratory practice of more complex technical skills and competencies related to preparing equipment and treatment of patients with a variety of medical, surgical and neuromuscular disabilities. Pre-Req BSC 2085, 2085L, PHT 1102C, 1201, 1201L, 1211, 1211L; Co-Req PHT 2120, 2120L, 2224, 2801. Laboratory fee. (4 hr. lab)

PHT2701
Rehabilitation Procedures
3.00 credits

Clinical manifestations and treatment techniques related to physical therapy, intervention for children and adults with injuries and disabilities (spinal cord and brain injuries or disease, limb amputations, burns). Pre-Req PHT 2120, 2120L, 2224, 2224L, 2801C. Co-Req PHT 2162, 2701L, 2810 (3hr. lecture)

PHT2701L
Rehabilitation Procedures Laboratory
2.00 credits

Laboratory practice in the technical skills and competencies required in the total rehabilitative care and treatment of the child or adult who has had a severe injury or disease resulting in multiple disabilities. Pre-Req PHT 2120, 2120L, 2224, 2224L, 2801C. Co-Req PHT 2162, 2701, 2810. Laboratory fee. (4 hr. lab)

PHT2801C
Clinical Practice and Conference I
2.00 credits

The students will be exposed to clinical experiences in supervised patient care activities in a variety of clinical facilities including general hospitals and physical therapy clinics. Prerequisites: PHT 1102C, PHT 1201, PHT 1201L, PHT 1211, PHT 1211L; Corequisites: PHT 2120, PHT 2120L, PHT 2224, PHT 2224L. (96 hr. clinical)

PHT2810
Clinical Practice and Conference II
7.00 credits

Intermediate clinical experiences in selected patient care activities under the supervision of a licensed physical therapist. Pre-Req PHT 2120, 2120L, 2224, 2224L, 2801C; Co-Req PHT 2162, 2701, 2701L (21. hr. clinic)

PHT2820
Clinical Practice and Conference III
7.00 credits

Advanced clinical experiences in patient care activities under the direct supervision of a licensed physical therapist. Prerequisites: PHT 2810, 2931. (27 hr. clinic)

PHT2931
Seminar for Physical Therapist Assistants
3.00 credits

Recognition of the expected current competency levels, and ethical and legal responsibilities of the physical therapist assistant in the health care system. Prerequisites: PHT 2162, 2701, 2701L, 2801. Corequisite: PHT 2810. (3 hr. lecture)

PHT2949
Co-op Work Experience 2: PHT
3.00 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op work experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative

Education Office to obtain registration approval. (3 hr. lecture)

Physician Assistant

PAS1800C
Physical Diagnosis 1
3.00 credits

A course which provides the students with the critical basis for and clinical exposure to techniques used in the proper performance and recording of the physical examination of patients. Prerequisites: BSC2085, BSC2085L, BSC2086, BSC2086L, CHM1045, CHM1045L, CHM1046, CHM1046L, MCB2010, and MCB2010L. (1 hr. lecture; 2 hrs. clinical)

PAS1801C
Physical Diagnosis 2
2.00 credits

In the hospital and classroom setting, the student will obtain experience in performing and recording patient histories and physical examinations and presenting clinical data. Prerequisites: HSA2532, PAS1800C, PAS1803, PAS1831, PAS2936. (1 hr. lecture; 2 hrs. clinical)

PAS1803
Clinical Anatomy and Physiology
2.00 credits

This course is designed for students accepted into the Physician Assistant Program. The course will review basic Anatomy and Physiology principles, while integrating important clinical concepts. Students will learn to transition from Anatomy and Physiology to Pathophysiology. Prerequisite: BSC2085, BSC2085L, BSC2086, BSC2086L, CHM1045, CHM1045L, CHM1046, CHM1046L, MCB2010, MCB2010L. (2 hr. lecture)

PAS1811
Introduction to Medicine 1 for PAs
5.00 credits

The first course in the sequence PAS 1811, 1820. Focuses on signs, symptoms, and pathophysiology of common diseases affecting pediatric, adult, and geriatric patients; diagnosis, therapeutic intervention and follow-up; patient education and preventative medicine are included.

Prerequisites: HSA2532, PAS1800C, PAS1803, PAS1831, PAS2936. (3 hr. lecture; 2 hrs. clinical)

PAS1812
Behavioral & Community Medicine 1 for PAS
1.00 credits

A biopsychosocial system approach to identify the individual, the family and community within the health care delivery system. Studies the American health care system, emphasizing the role of the PA profession, patient education, preventative medicine, community health, and medical legal ethics. Prerequisites: BSC2085, BSC2085L, BSC2086, BSC2086L, CHM1045, CHM1045L, CHM1046, CHM1046L, MCB2010, and MCB2010L. (1 hr. lecture)

PAS1813
Pathophysiological Basis of Disease 1
2.00 credits

First course in the sequence PAS 1813, 1824. An introduction to the underlying pathologic bases for specific disease processes. Prerequisites: HSA2532, PAS1800C, PAS1803, PAS1831, PAS2936. (2 hr. clinical)

PAS1820
Introduction to Medicine 2 for PAs
5.00 credits

The second course in the sequence PAS 1811, 1820. Focuses on signs, symptoms, and pathophysiology of common diseases of all ages. Prerequisites: PAS 1801C, 1811, 1821, 1824, 1830. (5 hr. lecture)

PAS1821
Behavioral & Community Education Medicine 2 for PAS
1.00 credits

The second course in the PAS 1812, PAS 1821 sequence. A continuation of the study of the biopsychosocial model for health. Prerequisites: PAS 1801C, 1812, 1813, 1822C, 1823, 1831. (1 hr. lecture)

PAS1822L
Electrocardiography
1.00 credits

A study of the principles and practical application of electrocardiography for the physician assistant. Includes practice in

Basic and Advanced Cardiac Life Support measures for life threatening emergencies. Prerequisites: HSA2532, PAS1800C, PAS1803, PAS1831, PAS2936. (2 hr. lab)

PAS1823
Pharmacology 1
4.00 credits

The first course in the sequence PAS 1823, 1830. The study of the preparation, uses, and action of drugs. Prerequisites: HSA2532, PAS1800C, PAS1803, PAS1831, PAS2936. (4 hr. lecture)

PAS1824
Pathophysiological Basis of Disease 2
2.00 credits

A continuation of PAS 1813. Focus is on cell dynamics and immunity. Prerequisites: HSA 2532, PAS 1801C, 1811C, 1812, 1813, 1822C, 1823. (2 hr. lecture)

PAS1831
Clinical Diagnostic Imaging
1.00 credits

A study of multiple imaging modalities employed in the diagnosis of pathologic processes. Prerequisites: BSC2085, BSC2085L, BSC2086, BSC2086L, CHM1045, CHM1045L, CHM1046, CHM1046L, MCB2010, and MCB2010L. (1 hr. lecture)

PAS2936
Contemporary Issues for the PA
1.00 credits

In this course the student will examine current issues, challenges, and practices influencing leaders in the field of health care education. The student will learn to use evidenced based medicine to research topics including leadership perspectives on health care education and promotion; the changing nature of health care delivery in the United States; demographic, economic, ethical, and political factors influencing the practice of health education. (1 hr. lecture)

PAS3019
Pathophysiological Basis of Disease III
2.00 credits

This course establishes scientific core knowledge and bridges the basic medical sciences with clinical medicine. The course

covers the pathophysiology of human diseases that appear as a result of structural and functional alterations of the human body systems. The course begins with the study of human anatomy and physiology pertinent to the pathological conditions presented and progresses to the pathophysiological topics needed by physician assistant students. The course will enhance decision-making ability when working as a PA in clinical practice. Prerequisite: PAS 1821, 1824, 3038C, 3075

PAS3038C
Physical Diagnosis III
2.00 credits

This course will build upon skills learned in Physical Diagnosis I and II and will prepare the physician assistant student with the essential skills for entry into clinical practice. Students will learn to perform medical interviews and physical examinations on professional patients and high-fidelity simulators. Prerequisite: HSA 2532, PAS 1800C, 1801C, 1811C, 1812, 1813, 1822C, 1823, 1831

PAS3042C
Clinical Medicine III for Physician Assistants
5.00 credits

Students will learn the signs and symptoms, diagnosis, therapeutic and non-therapeutic interventions of common diseases affecting pediatric, adult, and geriatric patients. Patient education and preventative medicine will also be included. Prerequisite: PAS 1821, 1824, 3038C, 3075

PAS3070
Clinical Pharmacotherapeutics
4.00 credits

This course will provide a team-based, active, and applied learning environment to solve patient cases related to the management of pharmacotherapy. Students will work within specified learning groups to solve patient cases. Students will learn from their future colleagues by working together to develop treatment plans and answer questions which are designed to promote active learning and critical thinking skills. Following each case, facilitated discussion will occur to promote student

learning and retention of material. Real world examples will be incorporated into discussions and explanations of patient cases. Prerequisite: PAS 1821, 1824, 3038C, 3075

PAS3075
Pharmacotherapeutics
4.00 credits

The second course in the sequence PAS 1823, 1830. The study of the use of drugs to treat disease, including contraindication and incompatibilities; drug interactions; side effects and their treatment, and dosages and calculations. Prerequisites: HSA 2532, PAS 1801C, 1811C, 1812, 1813, 1822C, 1823. (4 hr. lecture)

PAS3140
Genetics
4.00 credits

The study of the use of drugs to treat disease, including contraindication and incompatibilities; drug interactions; side effects and their treatment, and dosages and calculations. Prerequisite: PAS 1821, 1824, 3038C, 3075

PAS3203C
Surgical Problems & Procedures
5.00 credits

During this course the student will be exposed to the various aspects of general, orthopedic, cardiovascular, thoracic, ENT, neurologic, urologic, and pediatric surgical problems, their diagnosis and treatment. Laboratory components of this course will include learning fundamental techniques necessary in preoperative and postoperative care, including nasogastric intubation, central venous line placement, arterial and venous punctures and sterile techniques. Prerequisites: HSA 2532, PAS 1801C, 1811C, 1812, 1813, 1822C, 1823. (4 hr. lecture; 1 hr. lab)

PAS4191L
Internal Medicine
4.00 credits

The clinical course focuses on basic medical practice. The student is exposed to common medical problems encountered on in-patient and out-patient medical

services. Emphasis is placed on the history and physical examination and the process required in the proper work-up and management of the patient. Patient care experience in the various subdivisions of internal medicine including oncology, hematology, neurology, nephrology, gastroenterology, rheumatology, pulmonology, cardiology, and infectious diseases may be required. Prerequisites: PAS 3019, 3042C, 3070, 3140, 3203C. (18 hr. lab)

PAS4290
Surgery
2.00 credits

During the clinical course the student will be exposed to a variety of clinical problems routinely seen on the surgical service. Emphases will be placed on preoperative, intraoperative and postoperative management of the patient. In the operating room the student will practice aseptic technique, operating room principles, and assist in surgery. Prerequisites: PAS 3019, 3042C, 3070, 3140, 3203C. (96 hr. clinical)

PAS4391
Pediatrics
4.00 credits

This clinical course in pediatric care settings will introduce students to childhood illnesses and normal variations of growth and development. Students will perform histories and physical examinations and manage patients in the newborn nursery, pediatric out-patient clinic and emergency room. Prerequisites: PAS 3019, 3042C, 3070, 3140, 3203C. (192 hr. clinical)

PAS4470
Physician Assistant Practice Management
3.00 credits

This course is designed to assist the PA in understanding and applying the principles of management to a primary care practice. Students will learn the basic concepts of managing the patient/client, the office and medical team. (3 hr. lecture)

PAS4493
Family Medicine
4.00 credits

This clinical course introduces the student to the family practice setting where emphasis is placed on the common diseases treated by primary care practitioners in conjunction with other members of the health care team. The student is exposed to rural epidemiology, cultural diversity, and problems that affect delivery of health care in rural and under-served areas. Prerequisites: PAS 3019, 3042C, 3070, 3140, 3203C. (192 hr. clinical)

PAS4590
Obstetrics/Gynecology
2.00 credits

During this clinical course the student will participate on the obstetrical service managing pregnancy, labor and delivery and be introduced to pre-and postnatal complications. The student will also participate in the management of common gynecologic problems. Prerequisites: PAS 3019, 3042C, 3070, 3140, 3203C. (96 hr. clinical)

PAS4690
Emergency Medicine
2.00 credits

This clinical course in an emergency care setting will provide opportunities for the student to manage the acutely ill and traumatized patient. The student will learn to perform history and physical examination on the acutely ill patient with emphasis being placed on the management and support measures necessary in situations which are life threatening. Prerequisites: PAS 3019, 3042C, 3070, 3140, 3203C. (96 hr. clinical)

PAS4841
Geriatrics
2.00 credits

This clinical course provides the opportunity for students to become familiar with common physical and psychological problems encountered by the geriatric patient including cardiac and respiratory insufficiency, urinary tract infection, strokes, and diabetes mellitus. Prerequisites: PAS 3019, 3042C, 3070, 3140, 3203C. (96 hr. clinical)

PAS4940**Psychiatry****2.00 credits**

This clinical course in a psychiatric care setting will allow students to participate in daily rounds and become knowledgeable of the use of psychotropic medications for psychiatric disorders. Group therapy sessions will be a major part of the learning experience. Prerequisites: PAS 3019, 3042C, 3070, 3140, 3203C. (96 hr. clinical)

PAS4946**Physician Assistant Capstone Course****6.00 credits**

This is an experiential course that incorporates all the learning competencies of the BAS-HS with an option in PA courses. The student will learn to apply the knowledge, skills and abilities they have garnered throughout the program by identifying, researching and presenting a current challenge or trend in healthcare. (3 hr. lecture)

Physics

AST1002**Descriptive Astronomy****3.00 credits**

The solar system, the nature of electromagnetic radiation, astronomical instruments, stars, galaxies, and cosmology. Sessions are devoted to viewing the sky and to laboratory activities. Special fee. (3 hr. lecture)

AST1002L**Descriptive Astronomy Laboratory****1.00 credits**

This is a laboratory course available to students taking the introductory Astronomy course AST 1002. Students will learn to obtain astronomically relevant scientific information by performing experiments, exercises or observations. They will learn to measure, collect, and analyze scientific data, to do calculations with the data, and to report their results. (2 hr. lab)

PHY1004**Physics with Applications 1****3.00 credits**

Emphasizes the basic concepts and principles and their practical applications. Designed specifically for students in technical studies and for others wishing to

strengthen their physics background before taking advanced courses. Prerequisite: MAT 1033 with a grade of "C" or better; Corequisite: PHY1004L with a grade of "C" or better. Special fee. (3 hr. lecture)

PHY1004L**Physics with Applications 1 Lab****1.00 credits**

Laboratory for PHY 1004. Prerequisite: MAT 1033; corequisite: PHY 1004. Laboratory fee. (2 hr. lab)

PHY1005**Physics with Applications 2****3.00 credits**

Emphasizes the basic concepts and principles and their practical applications. Designed specifically for students in technical studies and for others wishing to strengthen their physics background before taking advanced courses. Prerequisite: PHY 1004; Corequisite: PHY 1005L. Special fee. (3 hr. lecture)

PHY1005L**Physics with Applications 2 Lab****1.00 credits**

Laboratory for PHY 1005. Prerequisite: PHY 1004; corequisite: PHY 1005. Laboratory fee. (2 hr. lab)

PHY1020**General Education Physics****3.00 credits**

This is a general education course for non-science majors. The students will learn the fundamentals laws of physics at an introductory level. Must be completed with a grade of "C" or better. (3 hr. lecture)

PHY1025**Basic Physics****3.00 credits**

This course will help students to facilitate the transition from high school to college/university physics. The course will emphasize problem-solving techniques. Topics may include units of measure, particle mechanics, conservation laws, and basic field concepts. Prerequisite: MAC1105. (3 hr. lecture)

PHY2048**Physics with Calculus 1****4.00 credits**

Foundation course for physical science and engineering majors. PHY 2048 covers classical mechanics and thermodynamics. PHY 2049 includes electricity, magnetism, waves and optics. Prerequisites: High school physics or PHY 1025, PHY 2053 or departmental approval and MAC 2311; corequisite: PHY 2048L. Special fee. (4 hr. lecture)

PHY2048L**Physics with Calculus 1 Lab****1.00 credits**

Laboratory for PHY 2048. Prerequisite: High school physics or PHY 1025 or PHY 2053 or departmental approval and MAC 2311; corequisite: PHY 2048. Laboratory fee. (2 hr. lab)

PHY2049**PHYSICS WITH CALCULUS 2****4.00 credits**

Foundation course for physical science and engineering majors. PHY 2048 covers classical mechanics and thermodynamics. PHY 2049 includes electricity, magnetism, waves and optics. Prerequisite: PHY 2048; corequisites: PHY 2049L and MAC 2312. Special fee. (4 hr. lecture)

PHY2049L**Physics with Calculus 2 Lab****1.00 credits**

Laboratory for PHY 2049. Prerequisite: PHY 2048; corequisites: PHY 2049 and MAC 2312. Laboratory fee. (2 hr. lab)

PHY2053**Physics (without Calculus) 1****3.00 credits**

An introduction to the basic principles of physics. PHY 2053 covers mechanics, sound and thermodynamics. Prerequisite: MAC 1114 or MAC 1147; corequisite PHY 2053L. Special fee (3 hr. lecture)

PHY2053L**Physics (without Calculus) 1 Lab****1.00 credits**

Laboratory for PHY 2053. Prerequisite: MAC 1114 or MAC 1147 corequisite: PHY 2053L. Special fee. (2hr. lab)

PHY2054
Physics (without Calculus) 2
3.00 credits

An introduction to the basic principles of physics. PHY 2053 covers mechanics, sound and thermodynamics. PHY 2054 includes electricity, magnetism and optics. Prerequisite: PHY 2053; corequisite: PHY 2054L. Special fee. (3 hr. lecture)

PHY2054L
Physics (without Calculus) 2 lab
1.00 credits

Laboratory for PHY 2054. Prerequisite: PHY 2053; corequisite: PHY 2048. Laboratory fee. (2 hr. lab)

PHY3101
Modern Physics
3.00 credits

This course will provide students with a deep understanding in areas of physics that lie beyond the scope of classical mechanics, thermo-dynamics and electromagnetism. Its content includes: the theory of relativity; wave properties of matter; an introduction to the quantum theory of atoms; the properties of molecules and solids; nuclear properties, interactions and applications; a brief description of elementary particles; and an overview of modern cosmology. The course will emphasize descriptive models and problem-solving techniques. Prerequisites: PHY 2048, 2049; Corequisite: PHY 3125L. (3 hr. lecture)

PHY3101L
Modern Physics Laboratory
1.00 credits

This course is a laboratory course designed to enhance the student's practice and understanding of areas of physics that lie beyond the scope of classical mechanics, thermo-dynamics and electromagnetism. These areas are covered in PHY 3101. While the main purpose of the course is to promote scientific understanding, the student will also acquire and demonstrate skills in the observation, measurement, recording, analysis, and reporting of experimental data. Prerequisites PHY 2049, MAP 2302; corequisite: PHY 3125. (2 hr. lab)

PHY3504C
Thermodynamics & Waves
4.00 credits

This course is an introduction to mechanical waves and classical thermodynamics. The student will learn the physics of oscillations and mechanical waves and the postulates and results of the kinetic theory of gases, the laws of thermodynamics and their applications to heat engines. (3 hr. lecture; 2 hr. lab)

PHY3802L
Intermediate Physics Laboratory
1.00 credits

This is a laboratory course consisting of a series of experiments related to intermediate courses in classical mechanics, waves, thermodynamics, electromagnetism and modern physics. The student will learn skills in the design, performance and reporting of physics experiments as well as reinforcing concepts learned in the corresponding physics courses. Prerequisites: PHY 2048L, 2049L, PHY 3504. (2hr. lab)

PHY4220
Classical Mechanics
3.00 credits

This one-semester course will provide students with a deep understanding of some fundamental topics of classical mechanics, reinforcing the concepts learned in PHY 2048, and providing a sound foundation for their comprehension. Most of the topics of elementary mechanics will be studied in a rigorous manner, requiring a higher level of math. Content includes Newtonian particle mechanics, oscillations, no inertial reference frames, central forces, dynamics of systems, mechanics of rigid bodies, the lagrangian formulation of dynamics, and an overview of the Hamiltonian formulation. The course will emphasize problem-solving techniques and computer simulations. Prerequisites: PHY 2048, 2049, MAP2302. (3 hr. lecture)

PHY4320
Intermediate Electromagnetism
3.00 credits

This course will provide students with a deep understanding of electricity and magnetism at an intermediate level. It

will reinforce the concepts learned in PHY 2049, providing a better understanding of the fundamental electromagnetic phenomena. Content includes: vector calculus, electrostatics, dielectrics, electric currents, magneto statics, electromagnetic induction, Maxwell's equations, wave optics, and electromagnetic radiation. The course will emphasize classical models and problem-solving techniques. Prerequisites: PHY 2049, MAP 2302, PHZ 3113. (3 hr. lecture)

PHY4424
Geometrical & Physical Optics
3.00 credits

This course is an intermediate study of topics in classical optics, as well as a conceptual introduction to modern optics. The student will learn the fundamental principles and applications of classical optics and optical instruments, and will gain an understanding of unfamiliar optical phenomena through inquiry activities. Prerequisites: PHY 2048, 2049, MAP 2302, PHY 3504. (3 hr. lecture)

PSC1121
General Education Physical Science
3.00 credits

A study of the major concepts and principles from each of the following areas: physics, chemistry, and astronomy. Prerequisite: MAT1033. (3 hr. lecture)

PSC1191
Physical Science Lab Fundamentals
1.00 credits

Students will learn to develop observation, measurement, analysis, and presentation skills using hands-on collaborative physics and chemistry activities. These skills will enhance future performance in Science, Technology, Engineering and Mathematics (STEM) courses and careers. Students will use current technology as well as critical thinking. (2 hr. lab)

PSC1515
Energy in the Natural Environment
3.00 credits

Investigation of the physical environment using energy as a theme to demonstrate the impact of science and technology

on the environment and on the lives of people. Special fee. (3 hr. lecture)

PSC1515L

Energy in the Natural Environment Laboratory

1.00 credits

A laboratory course designed to complement PSC 1515. Laboratory exercises explore the ways in which energy moves through the atmosphere, hydrosphere, lithosphere and biosphere, the advantages and disadvantages of various energy sources, and the potential of conservation as an energy resource. Laboratory fee. (2 hr. lab)

Political Science

CPO2100

Comparative European Government

3.00 credits

This course discusses the structures and functioning of the systems of government of three European states: Britain, France, and the Federal Republic of Germany. An attempt is made to analyze some of the current problems facing parliamentary governments, and to assess their performance in resolving them. A prior course in History or Social Science is desirable. Offered first semester. Given in English. Offered through Overseas Study Program. (3 hr. lecture)

CPO2408

Comparative Middle Eastern and North African Governments

3.00 credits

The Middle East & North Africa (MENA) has uninterruptedly been at the forefront of international geopolitics for almost a century. This enduring geopolitical visibility has important cultural, societal, economic, and security implications at national, regional, and international levels. This course is designed to tackle some of these issues by providing students with a historico-cultural, politico-economic, and geo-strategic survey of the Middle East. (3 hr. lecture)

CPO2441

Islam in the Modern World

3.00 credits

The survey course is designed to grant students a broad-based exposure across a variety of conceptual debates, historical events, and policy issues at the intersection of Islam and the modern world and the paths forward. The issues especially religiously-inspired and informed violence/conflict and debates surrounding them have assumed prominence in the 21st century with the resurgence of religion in politics and the subsequent struggle for Islam. These issues will be contextualized in normative, empirical and historical frameworks to equip students with a sophisticated and multi-dimensional conceptual toolbox to analyze them. (3 hr. lecture)

INR1949

Co-op Work Experience 1: INR

3.00 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

INR2002

International Relations

3.00 credits

The nature of international relations, the causes of leading international problems, foreign policies of world powers, international political organizations, and the origins of war and peace in the international arena. (3 hr. lecture)

INR2440

International Law and Organization

3.00 credits

International law and problems in world politics; a review of man's attempt to control international politics through international law and organizations, including the League of Nations, the United Nations,

NATO, and the European Union. A prior course in History or Social Science is desirable. Offered second semester. Given in English. Offered through Overseas Study Program. (3 hr. lecture)

INR2949

Co-op Work Experience 2: INR

3.00 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op Department approval and completion of 1949 Co-op work experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-operative Education Office to obtain registration approval. (3 hr. lecture)

ISS2270

Multicultural Communications and Relations

3.00 credits

This course uses an interdisciplinary approach to examine the complex interactions among ethnicity, race, gender, age, and class, as well as other ways in which we differ as they pertain to shaping personal awareness, understanding, and skills that will allow them to interact more effectively with diverse populations, age, groups, and lifestyles and to think through and value human diversity. This course has an overriding principle based on the concept of human rights. (3 hr. lecture)

POS2041

American Federal Government

3.00 credits

The American Constitution and its development, the organization and functions of the national government, political parties and the electoral process, and the relationship of the individual to the federal government. (3 hr. lecture)

POS2112
State and Local Government in America

3.00 credits

The typical state and local government organization, together with political practices in America, with special emphasis on the governmental organization and the major contemporary political problems of the State of Florida and of Florida communities. (3 hr. lecture)

POS2293
Islam and America

3.00 credits

Islam and the United States offers a survey treatment of the historically charged relationship between America and the Muslim World and the path forward. The course analyzes the intersection of religion, identity politics, geopolitics and economics of Islam-US relations in a historical context. These issue areas will be contextualized in normative, empirical and historical frameworks to equip the student with a sophisticated and multi-dimensional conceptual toolbox to analyze them. (3 hr. lecture)

POT2014
European Political Theory 1

3.00 credits

This course covers the more important trends in European political thought from Plato to the present. It examines those ideas which have contributed to the shaping of the political cultures of Western and Eastern Europe. It discusses the historical evolution of key concepts of politics such as freedom, order, political obligations, justice, consent, rights and duties, power and authority. A prior course in Government, History or Philosophy is desirable. Given in English. Level 1. Offered through Overseas Study Program. (3 hr. lecture)

Portuguese Language

POR1120
Elementary Portuguese 1

4.00 credits

An integrated (multi-media) approach to acquire proficiency in the basic skills (of the language)--listening/understand-

ing, speaking, reading, writing, and cross-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice in class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

POR1121
Elementary Portuguese 2

4.00 credits

A continuation of POR 1120. A proficiency-oriented course emphasizing the mastery of the basic skills of the language. Prerequisite: POR 1120. (4 hr. Lecture)

POR2220
Intermediate Portuguese 1

4.00 credits

Students will understand, speak read write, and gain cultural awareness of Portuguese through a systematic review (using an integrated, multimedia approach) of reading, grammar, and writing skills with emphasis on oral and written communication. Prerequisite: POR 1121 or equivalent. (4 hr. lecture)

POR2221
Intermediate Portuguese 2

4.00 credits

This is a continuation of Intermediate Portuguese 1. Students will learn to understand, speak, read, and write Portuguese. Students will also learn to develop cross-cultural awareness through a systematic review of reading and writing skills with emphasis on oral as well as written expression. Prerequisite: POR 2220 or equivalent. (4 hr. lecture)

Psychology

CLP1006
Psychology of Personal Effectiveness

3.00 credits

This is an applied psychology course which emphasizes understanding of the principles of effective human behavior and applying these to the areas of personal awareness, interpersonal relations, communication, and work/career development. Students will learn strategies to apply

these principles in both their personal and professional lives. (3 hr. lecture)

CLP2000
Dynamics of Behavior

3.00 credits

Analysis of mechanisms of adjustment, motivation, frustration and conflict, learning personality and psychotherapy. Emphasis is on the psychological processes of the normal individual functioning in society rather than on behavior disorders. (3 hr. lecture)

CLP2001
Basic Human Development

2.00 - 3.00 credits

Identification and classification of personal strengths, potentials, feelings, needs and values, to articulate personal goals, and to develop behavioral guidelines to increase the possibility of achieving these goals. Emphasis is on congruity between strengths, needs, feelings, and values, and behavior in order to experience greater interpersonal integrity and self-esteem. This is an experientially-taught course, with regular use of student interaction in dyads, triads, and small group experience. (2-3 hr. lecture)

CLP2140
Abnormal Psychology

3.00 credits

This course examines the major categories of mental disorders and their diagnostic criteria and treatments. Students will analyze the impact of mental disorders on individuals, families, and society and the impact of cultural factors, public attitudes, community resources, ethical issues, and legislation on the diagnosis and treatment of mental disorders. Prerequisite: PSY2012. (3 hr. lecture)

DEP2000
Human Growth and Development

3.00 credits

This course examines the physical, cognitive, social and emotional development of human beings from conception to death. Students will learn about theories of development, key issues in the field and apply research in developmental psychology throughout the prenatal, infancy, child-

hood, adolescence and adulthood periods of the lifespan. (3 hr. lecture)

DEP2100
Child Growth and Development
3.00 credits

This course in Child Growth and Development is designed especially for the student interested in the human life span from birth through the first eight years. The course is intended to acquaint the student with basic theoretical models of development and such specific topics as heredity teratogenic agents, learning, intelligence, socialization, personality, sex role identification, language acquisition and moral development. (3 hr. lecture)

DEP2481
Death Attitudes and Life Affirmation
3.00 credits

An analysis of the psychology, philosophy, and social function of death and dying, especially in relation to the general negative view of death in American society. Encourages a reconstruction of the participant's approach to living through a confrontation of their fear of death and of those life-denying traits and values which inhibit their growth. The course also investigates humane possibilities for funeral, bereavement, and counseling the terminally ill. (3 hr. lecture)

INP2390
Psychology of Work
3.00 credits

Applies the understanding of effective human relations to work situations. Personal dynamics for success are also considered. Students will be taught how to influence behavior on the job as they apply their knowledge and interpersonal skills to specific experiences in the work place. (3 hr. lecture)

PCO2731
Human Relations
3.00 credits

Emphasizes an awareness of the problems of a person's relationship to others, and the known laws and generalizations about the action patterns of individuals and groups. Effort is made to develop an awareness of

the techniques of effective interpersonal relations. (3 hr. lecture)

PSB2442
The Psychology of Addiction
3.00 credits

This course will examine psychological, medical, pharmacological, legal, economic and sociological aspects of addiction to and use of various chemicals. The course will take an in-depth look at narcotic sedatives, and stimulants including alcohol, cocaine, heroin, cannabis, caffeine and tobacco. (3hr. lecture)

PSY2012
Introduction to Psychology
3.00 credits

This course provides an overview of the field of psychology. Students will learn about the biological and environmental bases of behavior, and theories and concepts in such areas as personality, intelligence, learning, motivation, emotions and mental illness. Students will increase their knowledge about the brain-body connection and applied neurosciences. (3 hr. lecture)

PSY2050
Introduction to Forensic Psychology
3.00 credits

This course explores the interaction between psychology and the legal system. Students will learn the foundations, history, and terminology of forensic psychology and the influence of media and cultural issues. Students will also learn about the forensic psychologist's role in criminal and civil proceedings, public policy, law enforcement, and victimization. Prerequisite: PSY2012. (3 hr. lecture)

PSY2800
Psychology of Genocide
3.00 credits

Students will learn the psychological, social, and cultural roots of genocide, human cruelty, and mass violence. Students will examine the various factors influencing such acts, and the emotional and psychological impact upon victims, perpetrators, rescuers, and society. Prerequisite: ENC1101. (3 hr. lecture)

SOP2002
Social Psychology
3.00 credits

Combines a knowledge of psychology and sociology, in an interdisciplinary approach to the study of human interaction. Main themes deal with the nature of attitudes, how attitudes may be changed, the processes of interaction and the nature of group structures. (3 hr. lecture)

SOP2772
Human Sexuality
3.00 credits

This course examines the biological, theoretical, social, psychological, and cultural aspects of human sexuality. Students will learn about sexual anatomy, sexual response cycle, sex and gender development, sexual attraction and relationships, reproductive health issues, and social issues in sexuality. (3 hr. lecture)

Quantitative Methods in Business

QMB2100
Basic Business Statistics
3.00 credits

The application of basic statistical methods to business problems. Emphasis is on learning to select the appropriate statistical method of solving a given business problem, applying the chosen method, and interpreting the solution. Prerequisite: Acceptable score on the Algebra Placement test or equivalent; Fulfills Gordon Rule computational requirement. (3 hr. lecture)

Radiation Therapy Technology

RAT1021
Principles and Practice of Radiation Therapy 1
2.00 credits

A study of all major radiotherapy equipment such as linear accelerators and superficial ortho- and mega-voltage units. Auxiliary equipment such as simulators, immobilization devices, beam directors and modifiers will also be discussed. Patient

positioning, treatment planning, patient flow, and quality assurance will be presented in detail. Corequisites: RAT 1021, 1614, 1814L, 2243. (2 hr. lecture)

RAT1211
Human Disease
1.00 credits

The relationship of the human body to neoplastic and other pathologic diseases. Topics will include cells, tissues, organs and systems. Skeletal, muscular, nervous, endocrine, circulatory, reticulo endothelial, digestive, urinary, respiratory, and reproductive systems will be discussed. Prerequisites: ENC 1101, MAC 1105, BSC 2085, BSC 2085L; corequisites: RAT 1001, 1840. (1 hr. lecture)

RAT1614
Radiation Therapy Physics 1
2.00 credits

A basic radiation physics course containing fundamental principles and concepts. The course includes radiation production, properties, and characteristics as well as structure of the atom and matter, electrostatics, magnetism, electrodynamics, and the electromagnetic spectrum. Corequisites: RAT 1001, 1021, 1211, 1804L. (2 hr. lecture)

RAT1619
Elements of Treatment Planning
2.00 credits

Determination of radiation doses in treatment planning using computerized methodology. Corequisites: RAT 2690, 2834L. (2 hr. lecture)

RAT1657
Radiation Protection/Quality Assurance
2.00 credits

The student will learn to present basic principles of radiation protection and safety in radiation therapy. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are included. Specific responsibilities of the radiation therapist are discussed, examined and evaluated. (2 hr. lecture)

RAT1801L
Introduction to Clinic
2.00 credits

Students will rotate through various diagnostic imaging areas of the hospital in order to observe the equipment, procedures, and images produced. Opportunities to apply the skills learned in HSC0003 as well as the competencies achieved in RTE1000 will be included. Prerequisite: RAT 1840. (96 hr. clinic)

RAT1804L
RAT Clinic 1
5.00 credits

Students will learn radiation therapy procedures in a local radiation therapy department. Students are closely supervised by certified radiation therapy technologists as they are introduced to record-keeping and treatment units. Prerequisite: RAT 1801L. (240 hr. clinic)

RAT1814L
Clinic 2
8.00 credits

Continued patient treatment assignments. The responsibilities of the students increase as more complex competencies in patient treatment are mastered under direct supervision. Prerequisite: RAT 1804L. (384 hr. clinic)

RAT1824L
Clinic 3
8.00 credits

Continuation of advanced patient treatment competencies under the supervision of an ARRT Certified Radiation Therapy Technologist. Prerequisite: RAT 1814L; corequisites: RAT 2243. (24 hr. clinic)

RAT2022
Principles & Practice of Radiation Therapy 2
2.00 credits

Continued application of radiation therapy and its effectiveness in treatments. Advanced patient positioning, planning and flow, and quality assurance will be discussed. Prerequisite: RAT 1021; corequisites: RAT 1657, 1824L, 2241, 2618. (2 hr. lecture)

RAT2241
Radiobiology
2.00 credits

Principles of cell response to radiation. Factors influencing the effects of radiation, tissue sensitivity, and environmental factors are discussed. Corequisites: RAT 1657, 1824L, 2022, 2618. (2 hr. lecture)

RAT2243
Clinical Oncology & Neoplasms
2.00 credits

A continuation of medical oncology and pathology 1. Corequisites: RAT 1021, 1614, 1814L. (2 hr. lecture)

RAT2618
Radiation Therapy Physics 2
2.00 credits

Specifics of ionizing radiation such as details of production, interactions, and types of radiation and their application to the patient treatment. Properties of production, photon interactions, beam characteristics, and particle irradiation will be discussed. Prerequisite: RAT 1614; corequisites: RAT 1657, 1824L, 2022, 2241. (2 hr. lecture)

RAT2690
Integration of Radiation Therapy Concepts
2.00 credits

This course integrates anatomy, clinical oncology and neoplasms, radiation physics, radiation biology, and radiation protection as they relate to the treatment planning process. Basic concepts used to develop the treatment plan for patients with particular needs will be discussed. Prerequisite: RAT2022; corequisites: RAT 1619, 2690. (2 hr. lecture)

RAT2834L
Clinic 4
6.00 credits

This course includes clinical rotations through the radiation therapy department. Students will be provided the opportunity to apply theory learned from the previous semester in the various areas of the treatment process. Prerequisites: RAT 1824L; corequisites: RAT 1619, 2690. (288 hr. clinic)

Radiologic Technology

RTE1000
Orientation to the Imaging Sciences
2.00 credits

This course is an introduction to the overall field of Imaging Sciences, radiography in particular. Students will learn the basic principles of radiation protection as it applies to the various modalities in imaging and treatment, a history of the imaging sciences, ethical/legal issues, professional behavior, medical terminology, and math/physics. (2 hr. lecture)

RTE1418
Radiographic Technology 1
3.00 credits

Introduction to radiographic imaging including the relation of technical factors and accessories. The chemistry of manual and automatic film processing is included. Prerequisites: RTE 1503, 1503L, 1804. (3 hr. lecture)

RTE1503
Radiographic Positioning 1
3.00 credits

Basic routine positioning of the chest, abdomen, upper and lower extremities, digestive and urinary systems. Prerequisites: RTE 1000, 1418, 1503L, 1804. (3 hr. lecture)

RTE1503L
Radiographic Positioning Laboratory 1
1.00 credits

Laboratory for RTE 1503. Corequisite: RTE 1503. Laboratory fee. (2 hr. lab)

RTE1513
Radiographic Positioning 2
3.00 credits

Positioning of the bony pelvis, shoulder girdle, bony thorax, spinal column, skull and facial bones. Prerequisites: RTE 1418, 1503, 1503L, 1804; corequisites: RTE 1513L, 1613, 1814. (3 hr. lecture)

RTE1513L
Radiographic Positioning Laboratory 2
1.00 credits

Laboratory for RTE 1513. Corequisite: RTE 1513. Laboratory fee. (2 hr. lab)

RTE1613
Radiologic Physics
2.00 credits

Basic principles of physics involving x-radiation equipment, production and control. Prerequisite: RTE 1000. (2 hr. lecture)

RTE1804
Radiographic Clinic 1
5.00 credits

The first in a series of six clinical courses. Under direct supervision of faculty and clinical staff, performance of basic diagnostic radiographic procedures is carried out. Corequisites: RTE 1418, 1503, 1503L. (15 hr. clinic)

RTE1814
Radiographic Clinic 2
5.00 credits

The student will be evaluated on competency performances in routine fluoroscopic, and in urographic procedures. This is the second of six clinical education courses. Prerequisite: RTE 1804; corequisites: RTE 1513, 1513L, 1613. (15 hr. clinic)

RTE1824
Radiographic Clinic 3
5.00 credits

The student continues to rotate, under supervision, through different units of a Radiology Department. Development of a capability to assist in diagnostic procedures at a more complex level. Prerequisite: RTE 1814. (24 hr. clinic)

RTE2010
New Imaging Modalities in Radiology
1.00 credits

This course will enable the students to compare and contrast the current imaging modalities with the emerging technologies available in Radiology departments. Included in this course will be pictorial archiving and communications systems (PACs), digital imaging, and fusion imaging. Prerequisites: RTE 1418, 1613, 2457; corequisite: RTE2854. (1 hr. lecture)

RTE2385
Radiation Biology
2.00 credits

The biologic effects of the interaction of ionizing radiation with living matter. Prerequisite: RTE1000; 2834. (2 hr. lab)

RTE2457
Radiologic Technology 2
3.00 credits

A more in-depth study of radiographic exposure factors as they relate to specialized procedures and equipment. Prerequisite: RTE 1824; corequisites: RTE 2563, 2834, 2782. (3 hr. lecture)

RTE2563
Radiographic Positioning 3
2.00 credits

Radiographic procedures which utilize contrast media, sterile techniques, and/or specialized equipment and accessories. Prerequisite: RTE1824; corequisites: RTE 2457, 2782, 2834. (2 hr. lecture)

RTE2834
Radiographic Clinic 4
5.00 credits

Performance of procedures of increasing levels of complexity and responsibility including specialized diagnostic procedures. At this level the program faculty and clinical supervisor will determine if the student can perform procedures with less supervision. Prerequisite: RTE 1824; corequisites: RTE 2457, 2563, 2782. (15 hr. clinic)

RTE2844
Radiographic Clinic 5
8.00 credits

The fifth in a series of six clinical education courses. During this clinical course the student will perform standard quality assurance tests on radiographic equipment and accessories. In addition, the student will have competency evaluations to include a gastrointestinal series and either paranasal sinuses or facial bone studies. Prerequisite: RTE 2834. (24 hr. clinic)

RTE2854**Radiographic Clinic 6****3.00 credits**

The student will complete the competencies required by the American Registry of Radiologic Technologists to become eligible to apply to sit for the certification exam. The student will socialize into radiography practice by beginning to work more independently of a radiographer. The student will use organizational skills to provide care to patient clients assigned to them during radiographic exams. During this course the student will be assigned to one rotation during hours other than the normal working hours of the radiology department to gain competency in procedures not usually available during the day. Prerequisite: RTE 2844. (9 hr. clinic)

Reading

REA1125**Reading Skills Review****1.00 - 3.00 credits**

This course is designed to help students to develop specific literal and critical reading comprehension skills which are needed in preparation for the CLAST exam. Course content will focus on prescribed instruction based on reading assessment scores. (1-3 hr. lecture)

Reading College Preparatory

REA0007**Developmental Reading I****4.00 credits**

REA 0007 is a college preparatory reading course. Students will learn to build vocabulary skills, literal and critical comprehension skills, and successful reading strategies. Lab time required. Laboratory fee. Prerequisite: Computerized Placement Test (CPT) or the Post-secondary Education Readiness Test (PERT). (2 hr. lecture; 4 hr. lab)

REA0017**Developmental Reading II****4.00 credits**

REA 0017 is an intermediate college preparatory reading course. Students will learn to build vocabulary skills, literal and critical comprehension skills, and successful reading strategies. Lab time required. Laboratory fee. Prerequisite: Computerized Placement Test (CPT) or the Post-secondary Education Readiness Test (PERT). (2 hr. lecture; 4 hr. lab)

REA0056**Developmental Reading Module****2.00 credits**

This course is designed to develop reading comprehension skills for students whose entry placement scores do not meet requirements for degree credit courses (course not applicable for graduation requirements). This course may be taken in place of REA0017 for students who completed REA0017 in a prior term but did not earn a passing grade. Students will learn to focus on their individual reading skills to prepare for successful entry into college credit English courses. Prerequisite: Students must score 102-103 on the PERT or receive departmental permission. (2 hr. lecture)

Reading Education

LAE4211**Methods and Resources for Literacy Development in Young Children****3.00 credits**

The student will utilize a variety of assessment tools to measure and evaluate literacy in a K-3 setting. The student will learn to create and administer informal assessments, evaluate results, and differentiate instruction encompassing the reading components. (Twenty hours of clinical experience required in an approved first-third grade setting with ESOL students.). Pre-requisites: RED3009; Co-requisites: EEC4268. Special Fee. (3 hr. lecture)

RED3009**Early and Emergent Literacy****3.00 credits**

Pre-requisites: EEC2224, EEC3301. Special Fee. (3 hr. lecture)

RED3013**Foundations of Reading Instruction****3.00 credits**

The student will develop an understanding of reading components as a systematic process including oral language, phonological awareness, phonics, fluency, vocabulary, and comprehension. The student will recognize the principles, techniques, and procedures required to develop foundational reading skills to increase reading proficiency in P-12 settings utilizing evidence-based literacy instructional approaches. This course addresses Just Read, Florida! reading endorsement competencies 1 and 2. (15 hours of clinical experience). Pre/Co-requisites: EDG3321. Special Fee. (3 hr. lecture)

RED3393**Differentiated Instruction in Content Reading****3.00 credits**

The student will differentiate instruction for diverse learners by applying the principles of research-based strategies and integrating six components of reading: phonological awareness, phonics, oral language, fluency, vocabulary and comprehension. The student will learn about research-based practices related to instruction of efferent reading and select effective strategies to improve comprehension. This course addresses Just Read, Florida! reading endorsement competencies 2 and 3. Fifteen hours of clinical hours are required in a grade 4-8 setting. Pre-requisites: RED3013. Special Fee. (3 hr. lecture)

RED 4033**Teaching Foundations of Reading Instruction****3.00 credits**

The student will develop a foundational understanding of the six components of reading as a systematic process: oral language, phonological awareness, phonics, fluency, vocabulary, and comprehension.

COLLEGE CREDIT COURSES

The student will recognize the principles, techniques, and procedures required to develop the foundational reading skills that are essential to increasing reading proficiency in students from grades K-12. This is the first of five courses that lead to the Florida Department of Education Reading Endorsement. This course corresponds to Competency 1. (3 hr. lecture)

RED 4342 **Applications of Research-Based Instructional Practice** **3.00 credits**

Building on the foundation of RED4033, the student will apply the principles of evidence-based research in comprehensive reading instruction. The student will use the reading skills, techniques, and strategies that facilitate reading comprehension. The student will apply the principles of research-based reading instruction, and integrate the six components of reading to facilitate the comprehension of different texts. This is the second of five courses that lead to the Florida Department of Education Reading Endorsement. This course corresponds to Competency 2. Prerequisite: RED4033. (3 hr. lecture)

RED 4514 **Foundations of Assessment** **3.00 credits**

The student will select and administer appropriate assessments and analyze data to inform reading instruction to meet the needs of all students. The student will engage in a systematic problem-solving process to remediate reading difficulties in emergent, beginning, and fluent readers and will plan effective instructional interventions. This is the third of five courses that lead to the Florida Department of Education Reading Endorsement. This course corresponds to Competency 3. Prerequisite: RED4342. (3 hr. lecture)

RED4519 **Diagnosis and Instructional Intervention in Reading** **3.00 credits**

The student will obtain skills to evaluate and remediate reading difficulties in P-12 settings.

The student will identify, select, and administer appropriate assessments to differentiate instruction. The student will engage in a systematic problem-solving process to identify and remediate reading difficulties, using the results of informal reading assessments, to plan interventions. This course addresses Just Read, Florida! reading endorsement competencies 3 and 4. Fifteen clinical hours are required in a grade 1-3 setting. Pre-requisites: RED3393. Special Fee. (3 hr. lecture)

RED 4654 **Foundations and Applications of Differentiated Instruction** **3.00 credits**

The student will apply research-based best practices in educational neuroscience research related to the instruction of reading. Using knowledge of diverse learners, he or she will apply intensive, explicit, multisensory sequential approaches and instructional practices by differentiating the process, product, or context of their reading instruction, and providing scaffolds to enhance comprehension in all areas. This is the fourth of five courses that lead to the Florida Department of Education Reading Endorsement. This course corresponds to Competency 4. Prerequisite: RED4619. (3 hr. lecture)

RED 4854 **Reading Practicum** **3.00 credits**

The student will synthesize and apply knowledge of the six components of reading, formal and informal reading assessments, skills related to data analysis, and differentiation of instruction in order to plan and implement a comprehensive, intensive, effective, systematic, multisensory, research-based reading plan of instruction for all students. This is the fifth of five courses that lead to the Florida Department of Education Reading Endorsement. This course corresponds to Competency 5. Prerequisite: RED4654. (3 hr. lecture)

Real Estate

REE2040 **Real Estate Principles and Practices (P&P 1)**

4.00 credits

Topics include real property, liens, titles, contracts, tax factors, mortgages, property evaluation, real estate market, licensing requirements, legal aspects of the real estate business, and property management. Completion of this course is required by the Florida Real Estate Commission for approval to take the State Examination. (4 hr. lecture)

REE2085 **Post Licensure Education for Salespersons** **3.00 credits**

Is a state required course that all newly licensed salespersons must complete within two years of obtaining their first sales license. This survey course covers finance, appraising, salesmanship, property management and office management. It is the intent of the Florida Real Estate Commission that this course prepare a new licensee in a more functional and in-depth basis than does the license course. (3 hr. lecture)

REE2200 **Real Estate Finance** **3.00 credits**

Methods of financing Real Estate, in fixed rate, variable rate, FHA, VA, and graduated mortgage compared from the lenders', and the borrowers' point of view. Creative financing techniques such as buy-downs, and wrap-around mortgages will be discussed. (3 hr. lecture)

REE2270 **Mortgage Banking and Brokerage** **3.00 credits**

Development of an understanding of the finance industry as it relates to real estate. Detailed information concerning legal aspects of mortgages, brokerage regulation, ethics and all major sources of funds for real estate financing will be covered. Prerequisite: REE 2200 (3 hr. lecture)

Religion

REL1210
Religion of the Old Testament
3.00 credits

The historical sources and material in the Old Testament, with emphasis on its literary and cultural importance. (3 hr. lecture)

REL1240
Religion of the New Testament
3.00 credits

The historical sources and material in the New Testament, with emphasis on its literary and cultural importance. (3 hr. lecture)

REL2121
Survey of Religion in the U.S.
3.00 credits

A survey of non-native American religions in the United States from the 17th century to the present and their impact on American culture. The course will examine four general areas: the colonial era; the religions of the frontier, the South and African-American responses to before and after the Civil War; the 19th century continuing social, political and theological tension. (3 hr. lecture)

REL2300
Survey of World Religions
3.00 credits

A survey of the origins, beliefs and contemporary practices of the world's religions: Hinduism, Islam, Taoism, Zen Buddhism, Judaism, Christianity and Confucianism. Attention is given to the interactions between specific religions and the cultures in which they are practiced. (3 hr. lecture)

REL2600
Jewish History and Culture
3.00 credits

A survey of the development of Jewish history and culture from Biblical times to the present. (3 hr. lecture)

Respiratory Care

RET1024
Introduction to Respiratory Care
2.00 credits

This is an introductory course to the Respiratory Care discipline. Students will

learn the history of the profession, terminology, hospital and patient safety, infection control, patient assessment, accessing and utilizing the patient's medical record, critical thinking, Respiratory Care protocols, and patient education. Prerequisite: ENC 1101; corequisite: RET 1024L, 1484. (2 hr. lecture)

RET1024L
Introduction to Respiratory Care
Laboratory
1.00 credits

Laboratory for RET 1024. Corequisite: RET 1024. Laboratory fee. (2 hr. lab)

RET1484
Respiratory Care Pathophysiology 1
2.00 credits

This is an introductory course in the study of pulmonary and cardiovascular anatomy, physiology and pathology. Students will learn terminology, disease classification, diagnostic techniques and related physiological concepts. Prerequisite: ENC 1101. Corequisite: RET 1024. (2 hr. lecture)

RET2264
Advanced Modalities and Monitoring
2.00 credits

This is an advanced course relating to critical care. Students will learn advanced techniques in invasive and non-invasive monitoring, electrocardiographic monitoring and interpretation, alternatives to conventional ventilation and advanced cardiovascular support systems. Prerequisite RET 2284; corequisite RET 2714. (2 hr. Lecture)

RET2274
Respiratory Care Theory 1
2.00 credits

Theory of supplemental oxygen and humidity in respiratory pathology. Special emphasis is given to the medical, surgical, and pediatric patients and their cardiopulmonary physiology as it relates to therapeutic oxygen techniques. Corequisite: RET 1024, 1484, 2274L. (2 hr. lecture)

RET2274L
Respiratory Care Theory Laboratory 1
1.00 credits

Laboratory for RET 2274. Corequisite: RET 2274. Laboratory fee. (2 hr. lab)

RET2275
Respiratory Care Theory 2
2.00 credits

Emphasis on pressure breathing modalities, chest physiotherapy, and incentive devices. Prerequisite: RET 2274; corequisite: RET 2275L. (2 hr. lecture)

RET2275L
Respiratory Care Theory Laboratory 2
1.00 credits

Laboratory for RET 2275. Corequisite: RET 2275. Laboratory fee. (2 hr. lab)

RET2284
Principles of Mechanical Ventilation
2.00 credits

A continuation of RET 2275. A concentrated course of study which focuses on the theoretical operation, application and procedures related to critical care and mechanical ventilation. Prerequisites: RET 2275, 2275L; corequisite: RET 2284L. (2 hr. lecture)

RET2284L
Principles of Mechanical Ventilation
Laboratory
2.00 credits

Laboratory for RET 2284. This course will provide an in depth study of the operation of mechanical ventilation devices and associated monitors. Patient safety, troubleshooting and application are stressed. Corequisite: RET 2284. Laboratory fee. (4 hr. lab)

RET2350
Respiratory Care Pharmacology
2.00 credits

This course is designed to provide training in the basic principles of the administration of medications including dosage and solutions. The drugs administered by respiratory therapists are covered in-depth, along with an introduction to the general pharmacological classifications of other drugs that may be administered to pulmonary patients.

Prerequisites: CHM 1033, RET 1484; corequisites: RET 2503, 2275, 2275L. (2 hr. lecture)

RET2414
Pulmonary Studies
2.00 credits

In-depth study of diagnostic techniques in the field of pulmonary medicine which includes lung volumes, static and dynamic mechanics of breathing, ventilation, distribution of gases, diffusion and arterial blood gas sampling and handling. Corequisite: RET 2414L. (2 hr. lecture)

RET2414L
Pulmonary Studies Laboratory
1.00 credits

Laboratory for RET 2414. Simulated clinical settings of diagnostic techniques used to evaluate pulmonary functions. Laboratory fee. (2 hr. lab)

RET2503
Respiratory Care Pathophysiology 2
3.00 credits

This is a foundation course on cardiopulmonary disease. The student will learn the pathogenesis, diagnosis, treatment and rehabilitation of the diseases included in the course. Prerequisite: RET 1484; Prerequisite: RET 1484. (2 hr. lecture)

RET2601
Respiratory Care Seminar
2.00 - 3.00 credits

This is an advanced course focuses on clinical and nonclinical issues. Students will learn concepts including, but not limited to, clinical research, legal and ethical concerns, home care, extended care, rehabilitation and management. ACLS and PALS certification obtained. (2-3 hr. lecture)

RET2714
Perinatal and Pediatric Respiratory Care
2.00 credits

This course is designed to provide training in perinatal and pediatric respiratory care. Students will learn assessment and therapeutic techniques related to critical care. Corequisites: RET 2264, 2714L. (2 hr. lecture)

RET2714L
Perinatal & Pediatric Respiratory Care Laboratory
1.00 credits

This is an introductory laboratory course that will explore assessment and Respiratory Care therapeutics of the perinatal and pediatric patient populations. The student will learn to apply physical assessment techniques, oxygen aerosol and humidity therapies, therapeutic procedures, airway management, resuscitation and management of mechanical ventilation. Corequisite: RET 2714. (2 hr. lab)

RET2832
Respiratory Care Clinic 1
2.00 credits

This is an introductory clinical practice course. The student will learn psychomotor skills related to basic respiratory care and patient care procedures including patient charting, vital signs, infection control and non-pressurized oxygen adjuncts. Prerequisites: RET 2274, 2274L. (6 hr. clinical)

RET2833
Respiratory Care Clinic 2
5.00 credits

In conjunction with RET 2274, 2274L and RET 1024, 1024L, RET 2832 is designed to allow the student to develop psychomotor skills related to basic respiratory care and patient care procedures (patient charting, vital signs, infection control and non-pressurized oxygen adjuncts). During the rotation, the student is provided with the opportunity to apply and discuss the theory and techniques as presented in corequisite courses. Corequisites: RET 1024, 1024L 1484, 1484L, 2274, 2274L, 2350. (15 hr. clinic)

RET2834
Respiratory Care Clinic 3
8.00 credits

This course is a continuation of RET 2833. Training will be provided on the clinical application of procedures and techniques relating to respiratory critical care. Prerequisites: RET 2284, 2284L; corequisites: RET 2714. (24 hr. clinic)

RET2835
Respiratory Care Clinic 4
8.00 credits

This course is designed to provide the student with the clinical application of adult, pediatric, and neonatal intensive respiratory care. Procedures and techniques presented in RET 2280, 2714, 2264 as it relates to their clinical application will be emphasized. Prerequisite: RET 2834; corequisite: RET 2601. (24 hr. clinic)

Russian Language

RUS1120
Elementary Russian 1
4.00 credits

An integrated (multi-media) approach to acquire proficiency in the basic skills (of the language)--listening/understanding, speaking, reading, writing, and cross-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice in class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

RUS1121
Elementary Russian 2
4.00 credits

A continuation of RUS 1120. A proficiency-oriented course emphasizing the mastery of the basic skills of the language. Prerequisite: RUS 1120. (4 hr. Lecture)

Social Science

ISS1120
The Social Environment
3.00 credits

The Social Environment is an interdisciplinary course that emphasizes the cultural, political, economic and global dimensions of societies. Its main objective is to promote knowledge of contemporary and historical forces that shape our social environment and engage students in a life-long process of inquiry and decision-making. (3 hr. lecture)

ISS1161
The Individual in Society
3.00 credits

This is an interdisciplinary course that emphasizes understanding of oneself as a unique individual who, as part of global community, is responsible for decisions affecting his/her psychological, social, environmental, and physical well-being. Main themes include personality and self, society and culture, development and the life cycle, and the maintenance of physical and psychological health. (3hr. lecture)

ISS1301
Introduction to Social Research
3.00 credits

This course is a general introduction to research methodology in the Social Sciences, paying particular attention to research design, data collection and data analysis. This is a course in Applied Social Sciences that will provide students with a survey understanding of social scientific research. This course will include examination of empirical research, including literature reviews, theory, methodology, data collection, data analysis and presentation of results. (3 hr. lecture)

ISS1935
Social Science Seminar
1.00 - 3.00 credits

Small group and individual work, to analyze in greater depth issues arising out of the interdisciplinary approach to the study of social environment and social economic change; it is designed for those students who are engaged in or have completed ISS 1120. (1-3 hr. seminar)

Sociology

SYG2000
Introduction to Sociology
3.00 credits

This course engages in a scientific study of society providing an overview of sociology as a social science. It includes its development as a discipline and methodology. It examines culture as a basis for human behavior, how it is acquired and its norms obeyed. It explores the issues of social inequality within society, including the issues of ethnicity and gender.

The issues of social change and social institutions are examined, along with those of demography and urbanization, together with the great challenges these currently pose to the modern world. (3 hr. lecture)

SYG2010
Social Problems
3.00 credits

An analysis of the major contemporary and recurring social problems, emphasizing scientific search for variables involved and exploring alternative solutions. (3 hr. lecture)

SYG2230
Multi-Ethnic America
3.00 credits

An introduction to the theory and problems of minority groups in American society. The focus is on structural inequality, institutional discrimination, and the changing patterns of prejudice and discrimination. (3 hr. lecture)

SYG2430
Marriage and the Family
3.00 credits

The family as a social institution--its origin and development, its forms and functions, its interrelation with other social institutions, and its role in contemporary civilization. Areas of study include factors contributing to or acting against successful, stable marriage. (3 hr. lecture)

Sonography

SON1000L
Introduction to Sonography 1
1.00 credits

An introduction to the physical principles of diagnostic ultrasound. Bases of imaging with ultra sound are discussed as well as clinical units in the various areas of specialization. In conjunction with the lectures, supervised laboratory classes are conducted to familiarize students with operations of the equipment in each of the clinical areas. Corequisites: SON 1111C, 1121C. (2 hr. lab)

SON1001L
Introduction to Sonography 2
1.00 credits

This second introductory course will cover the past present and future of sonography. After the historical landmarks are identified, the focus will be on the current diversity of applications of diagnostic medical sonography. Students will also discover future trends and developments on the technology horizon of the profession. Prerequisite: SON 1000L. (2 hr. lab)

SON1005L
Basic Sonography
2.00 credits

This course is designed to cover the essential of the profession of Diagnostic Medical Sonography. Topics include: professionalism, medical ethics, hospital administration, sonographic terminology, quality assurance, photographic principles, related radiological specialties and scanning techniques. Laboratory experience will include equipment use and quality assurance techniques. Prerequisite: SON 1000L. Laboratory fee. (4 hr. lab)

SON1006L
Professional Aspects of Sonography
1.00 credits

An introduction to the professional aspects of sonography. Topics include: medical ethics and law, hospital administration, quality assurance/quality control and management. Laboratory experience includes actual phantom scanning conducting equipment protocols, and participation on a mock ethics board. (2 hr. lab)

SON1100L
Principles of Protocols of Imaging
2.00 credits

An introduction to radiographic film, its handling & processing and the various radiographic specialties. Laboratory experience includes: film composition and identification, rapid processing, photographic techniques, reading H&D curves, performing sensitometry and identifying film artifacts. During radiographic specialties, there will be an introduction to CT, MRI, and the areas of radiologic technology in order to

discover how these modalities compliment sonography. (4 hr. lab)

SON1111C

Abdominal Sonography 1

2.00 credits

An in-depth course designed to cover all aspects of clinical abdominal ultrasound studies. Subject matter includes: review of normal anatomy (ultrasonic appearance), indications for ultrasound studies, clinical presentation and data, pathophysiological basis of disease, ultrasonic manifestations of diseases, recognition of adequate images and scanning pitfalls. Corequisite: SON 1000L. (1 hr. lecture; 2 hr. lab)

SON1112C

Abdominal Sonography 2

2.00 credits

An in-depth course designed to cover all aspects of clinical abdominal ultrasound studies. Subject matter includes: review of normal anatomy (ultrasonic appearance), indications for ultrasound studies, clinical presentation and data, pathophysiological basis of disease, ultrasonic manifestations of diseases, recognition of adequate images and scanning pitfalls. Prerequisite: SON 1111C. Laboratory fee. (1 hr. lecture; 2 hr. lab)

SON1113L

Sonography Cross Sectional Anatomy

2.00 credits

A thorough course aimed at teaching the student to understand anatomical relationships and recognize structures on cross-sectional and sagittal diagrams, photographs of gross anatomy and sonography. The laboratory conducted in conjunction with the classroom lectures is designed to identify all normal anatomical landmarks in multiple planes in actual scanning situations. (4 hr. lab)

SON1115L

Duplex Abdominal Sonography

1.00 credits

This course is designed to cover aspects of duplex abdominal sonography applications. Topics include: the aorta and its branches, the IVC and its tributaries, and the portal system. Subject matter includes: etiology, pathophysiology, clinical presen-

tations, sonographic appearance and differential diagnosis of diseases. Prerequisite: SON 1112C. (2 hr. lab)

SON1121C

Obstetrics/Gynecology Sonography 1

2.00 credits

An in-depth course designed to present all aspects of clinical OB/GYN ultrasound studies. Subject matter includes: review of normal anatomy (ultrasound appearance), indications for ultrasonic studies, clinical presentation, clinical data, pathophysiological basis of disease, ultrasonic manifestations of diseases, recognition of adequate images and scanning pitfalls. Corequisite: SON 1000L. (1 hr. Lecture; 2 hr. lab)

SON1122C

Obstetrics/Gynecology Sonography 2

2.00 credits

An in-depth course designed to cover all aspects of clinical OB/GYN ultrasound studies. Subject matter includes: review of normal anatomy (ultrasound appearance), indications for ultrasonic studies, clinical presentation, clinical data, pathophysiological basis of disease, ultrasonic manifestations of diseases, recognition of adequate images and scanning pitfalls. Prerequisite: SON 1121C. (1 hr. lecture; 2 hr. lab.)

SON1141C

Small Parts Sonography

2.00 credits

An in-depth course designed to cover all aspects of clinical abdominal ultrasound studies. Subject matter includes: review of normal anatomy (ultrasonic appearance), indications for ultrasound studies, clinical presentation and data, pathophysiological basis of disease, ultrasonic manifestations of diseases, recognition of adequate images and scanning pitfalls. Prerequisite: SON 1112C. (1 hr. lecture; 2 hr. lab)

SON1145L

Pediatric Sonography

1.00 credits

This course is designed to cover aspects of pediatric ultrasound examinations. Topics include: Liver, biliary, spleen, renal, adrenal, gastrointestinal, scrotum, and musculoskeletal structures. Subject matter includes:

etiology, pathophysiology, clinical presentations, sonographic appearance and differential diagnosis. Prerequisite: SON 1141C. (2 hr. lab)

SON1804

Clinic 1

2.00 credits

This is the first in a series of six (6) clinics in which the student is assigned to a medical facility. The student is afforded a hands-on experience in sonography under the supervision of a clinical instructor, sonographer or physician. Corequisite: SON 1000L. (16 hr. clinic)

SON1814

Clinic 2

2.00 credits

This is the second in a series of six (6) clinics in which the student is assigned to a medical facility. The student is afforded hands-on experience in sonography under the supervision of a clinical instructor, sonographer or physician. Prerequisite: SON 1804. (8 hr. clinic)

SON1824

Clinic 3

3.00 credits

This is the third in a series of six (6) clinics in which the student is assigned to a medical facility. The student is afforded hands-on experience in sonography under the supervision of a clinical instructor, sonographer or physician. Prerequisite: SON 1814. (24 hr. clinic)

SON2139L

Cardiovascular Principles

1.00 credits

An introductory course to techniques other than echocardiography utilized in the diagnosis of cardiovascular disease. Topics discussed include physical examination, electrocardiogram, Phonocardiogram, cardiac catheterization, and nuclear medicine cardiology. Prerequisite: SON 2400C; Corequisite: SON 2401C. (2 hr. lab)

SON2161C
Neurosonography
2.00 credits

A comprehensive course designed to examine sonographic imaging of the neonatal and infant brain, with an introduction to ultra-operative brain and spinal cord imaging. Emphasis is placed on normal brain anatomy, congenital and malformations and acquired pathologic conditions. Prerequisites: SON 1113L, 1141C. Special fee. (1 hr. lecture; 2 hr. lab)

SON2171C
Vascular Sonography
2.00 credits

This course is designed to cover aspects of Clinical Vascular Technology. Topics include the pathophysiological levels of disease, clinical presentation and data, hemodynamic of blood flow, anatomy and physiology of the vascular system and anatomical appearance. Prerequisite: SON 2161C. (1 hr. lecture; 2 hr. lab)

SON2400C
Echocardiography 1
2.00 credits

An in-depth course designed to present all aspects of clinical cardiovascular ultrasound studies. Topics discussed are: pathophysiological basis of diseases, clinical presentation and clinical data, Doppler and echocardiographic findings in disease, hemodynamic relationships, scanning pitfalls and differential diagnosis. Prerequisite: SON 1000L. (1 hr. lecture; 2 hr. lab)

SON2401C
Echocardiography 2
2.00 credits

An in-depth course designed to cover all aspects of clinical cardiovascular ultrasound studies. Topics discussed are pathophysiological basis of diseases, clinical presentation and clinical data, Doppler and echocardiographic findings in disease, hemodynamic relationships, scanning pitfalls and differential diagnosis. Prerequisite: SON 2400C. (1 hr. lecture; 2 hr. lab)

SON2614C
Acoustical Physics and Instrumentation 1
2.00 credits

The course will present a review of fundamental physics and in-depth study of the physical principles of diagnostic ultrasound. Topics discussed include: properties of sound waves, interaction of sound waves with matter, generation of ultrasound and principles of Doppler ultrasound. Prerequisite: SON 1005L. (1 hr. lecture; 2 hr. lab)

SON2618C
Acoustical Physics and Instrumentation 2
2.00 credits

Physical principles of Ultrasound Instrumentation-A course designed to familiarize the student with the physical principles and modes of operation of diagnostic ultrasound equipment. Subject matter includes: transducers, display systems, component parts of a scanning system, real-time scanners, Doppler equipment, quality control, routine maintenance and recent developments. Prerequisites: SON 2614C, CGS 1060. (1 hr. lecture; 2 hr. lab)

SON2619C
Doppler Principles and Instrumentation
2.00 credits

This course presents a review of fundamental physics and an in-depth study of Doppler Physical Principles of Diagnostic Ultrasound. Topics also include Doppler Instrumentation, equipment, display systems, quality control, and hemodynamics of blood flow. Prerequisite: SON 2618C. Laboratory fee. (1 hr. lecture; 2 hr. lab)

SON2834
Clinic 4
2.00 credits

This is the fourth in a series of six (6) clinics in which the student is assigned to a medical facility. The student is afforded hands-on experience in sonography under the supervision of a clinical instructor, sonographer or physician. Prerequisite: SON 1824. (16 hr. clinic)

SON2844
Clinic 5
3.00 credits

This is the fifth in a series of six (6) clinics in which the student is assigned to a medical facility. The student is afforded hands-on experience in sonography under the supervision of a clinical instructor, sonographer or physician. Prerequisite: SON 2834. (24 hr. clinic)

SON2854
Clinic 6
3.00 credits

This is the last in a series of six (6) clinics in which the student is assigned to a medical facility. The student is afforded hands-on experience in sonography under the supervision of a clinical instructor, sonographer or physician. Prerequisite: SON 2844. (24 hr. clinic)

SON2910L
Directed Research
1.00 credits

This course is designed to afford students an opportunity to develop their research skills, broaden their educational horizons, and further investigate a particular area of interest in the field of ultrasound. Students will select a topic for research, investigate and gather information, and compile the results for presentation, competition and publication. (2 hr. Lab)

SON2930L
Seminar in Sonography
1.00 credits

Students will participate in the various types of continuing education. This may include: society meetings, seminars, conferences and in-services. (2hr. lab)

SON2931L
Film Critique 1
1.00 credits

An extensive laboratory to prepare the student to recognize quality images, anatomy, patient positioning, pathology, and scanning technique errors as well as artifacts. For each class, the student will present a case from their current rotation of the teaching file. The class includes all technical and clinical information as well as

interpretation by the supervising physician. Prerequisite: SON 1000L. Laboratory fee. (2 hr. lab)

SON2932L
Film Critique 2
1.00 credits

An extensive laboratory to prepare the student to recognize quality images, anatomy, patient positioning, pathology, and scanning technique errors as well as artifacts. For each class, the student will present a case from their current rotation of the teaching file. The class includes all technical and clinical information as well as interpretation by the supervising physician. Prerequisite: SON 2931L. Laboratory fee. (2 hr. lab)

SON2933L
Film Critique 3
1.00 credits

An extensive laboratory to prepare the student to recognize quality images, anatomy, patient positioning, pathology, and scanning technique errors as well as artifacts. For each class, the student will present a case from their current rotation of the teaching file. The class includes all technical and clinical information as well as interpretation by the supervising physician. Prerequisite: SON 2932L; Corequisite: SON 2401C. (2 hr. lab)

SON2934L
Film Critique 4
1.00 credits

An extensive laboratory aimed at teaching the student to recognize quality images, anatomy, patient positioning, pathology, and scanning technique errors as well as artifacts. For each class, the student will present a case from their current rotation of the teaching file. The presentation will include all technical and clinical information as well as the final interpretation by the supervising physician. Prerequisite: SON 2933L. Laboratory fee. (2 hr. lab)

SON2935L
Film Critique
1.00 credits

An extensive laboratory aimed at teaching the student to recognize quality images,

anatomy, patient positioning, pathology, and scanning technique errors as well as artifacts. For each class, the student will present a case from their current rotation of the teaching file. The presentation will include all technical and clinical information as well as the final interpretation by the supervising physician. Prerequisite: SON 2934L. Laboratory fee. (2 hr. lab)

SON2950L
Journal Review
1.00 credits

Students select scientific articles from sonography journals for review and presentation in class. (2 hr. lab)

Spanish Language and Literature

SPN1030
Spanish for Health Professionals 1
4.00 credits

Conversational Spanish for students in the Allied Health programs only. Emphasis is on the practical application of Spanish to situations relative to patients and personnel. (3-4 hr. lecture)

SPN1120
Elementary Spanish 1
4.00 credits

An integrated (multi-media) approach to acquire proficiency in the basic skills (of the language)--listening/understanding, speaking, reading, writing, and cross-cultural awareness. Emphasis on practical vocabulary and accurate pronunciation. Practice in class and laboratory in understanding and using the spoken language; reading and writing with progressive grammatical explanations. (4 hr. lecture)

SPN1121
Elementary Spanish 2
4.00 credits

A continuation of SPN 1120. A proficiency-oriented course emphasizing the mastery of the basic skills of the language. Prerequisite: SPN 1120. (4 hr. Lecture)

SPN1170
Spain Travel Study
3.00 - 6.00 credits

A course designed for students who wish to combine the study of Spanish with subsequent travel to a Spanish-speaking country. Prerequisites: SPN 1000, 1120 or permission of instructor. Offered through overseas study program. (3 hr. lecture)

SPN2220
Intermediate Spanish 1
4.00 credits

Students will understand, speak, read, write, and gain cultural awareness of Spanish through a systematic review (using an integrated, multimedia approach) of reading, grammar, and writing skills with emphasis on oral and written communication. Prerequisite: SPN 1121 or equivalent. (4 hr. lecture)

SPN2221
Intermediate Spanish 2
4.00 credits

This is a continuation of Intermediate Spanish 1. Students will learn to understand, speak, read, and write Spanish. Students will also learn to develop cross-cultural awareness through a systematic review of reading and writing skills with emphasis on oral as well as written expression. Prerequisite: SPN 2220 or equivalent. (4 hr. lecture)

SPN2240
Intermediate Spanish 1 Conversation & Composition
3.00 credits

Promotes facility in understanding, speaking and writing the language. Emphasis on everyday conversation. Prerequisite: SPN 2221 or equivalent. (3 hr. lecture)

SPN2241
Intermediate Spanish 2 Conversation & Composition
3.00 credits

Oral practice with idiomatic expressions; oral reports on collateral readings; class discussions. Prerequisite: SPN 2240 or equivalent. (3 hr. lecture)

SPN2340
Spanish for Native Speakers 1
3.00 credits

Writing, spelling and punctuation, sentence structure and reading selections for vocabulary expansion as they are relevant to the training of individual students. Prerequisite: oral ability to communicate in Spanish or permission of department chairperson. (3 hr. lecture)

SPN2341
Spanish for Native Speakers 2
3.00 credits

A continuation of SPN 2340. Prerequisite: SPN 2340 or equivalent. (3 hr. lecture)

SPT2842
Contrastive Analysis Spanish/English
3.00 credits

Comparison/contrastive study of the phonology, morphology and syntax of Spanish and English. Recommended for students of translation and interpretation.. (3 hr. lecture)

SPW2010
Selected Readings in Spanish Literature
3.00 credits

A study of outstanding works, authors, genres, or major literary currents in Spain. (3 hr. lecture)

SPW2020
Selected Readings in Latin American Literature
3.00 credits

A study of outstanding works, authors, genres, or major literary currents in Latin America. (3 hr. lecture)

Speech Communication

SPC1017
Fundamentals of Speech Communication
3.00 credits

This course provides students with the oral communications skills necessary for success in personal, professional and educational settings. Students will learn through the study and experiential practice of inter-

personal communication, presentational speaking and group dynamics of communication and be able to use them effectively. Gordon Rule assigned. Special fee. (3 hr. lecture)

SPC2050
Voice and Diction
3.00 credits

Effective voice production and articulation, acceptable pronunciation, intonation, rhythm, and phrasing, a consideration of elementary vocal anatomy and the fundamentals of the science of sound. Specific speech problems will be handled on an individual basis. (3 hr. lecture)

SPC2511
Argumentation and Debate
3.00 credits

The principles of argumentation, including analysis, evidence, inference and refutation, and their application to issues of current public interest. The course provides opportunities for debating practice. Prerequisite: SPC 2608 or equivalent. (3 hr. lecture)

SPC2594
Forensic Laboratory
1.00 - 3.00 credits

Advanced techniques of debate and other forensics, keyed primarily to those interested in intercollegiate forensic competition. Prerequisite: Permission of the instructor. May be repeated for credit. (2-6 hr. lab)

SPC2601
Advanced Public Speaking
3.00 credits

For students who have had a basic course in speech or previous experience in public speaking. The course provides participation in such areas as contest, community and on-campus speaking, and speech criticism. Students receive instruction in audience analysis and rhetorical principles and strategies. Prerequisite: SPC 2608. (3 hr. lecture)

SPC2608
Introduction to Public Speaking
3.00 credits

SPC 2608 is a course in which students will practice speaking to audiences as well as

listening to and critically analyzing oral communication. Through oral and written communication, students will learn communication theory as applied to a variety of communication situations and social interactions. Prerequisite(s): Placement by Scholastic Assessment Test (SAT) verbal subtest score; American College Testing (ACT) English subtest score; Computerized Placement Test (CPT)English subtest score; or ENC 0025 with a grade of S. Gordon Rule assigned.(3 hr. lecture)

SPC2940
Peer Teaching in Speech Communication
3.00 credits

Provides the opportunity for outstanding speech students to advance their skills by functioning as student teachers in speech courses which they have completed successfully. Prerequisite: Permission of the department. (3 hr. lecture)

Statistics

STA2023
Statistical Methods
3.00 credits

This course will introduce students to statistical methods. Students will learn topics to include collecting data, grouping data, presenting data, measures of central tendency, dispersion, probability, hypotheses testing, confidence intervals, and correlation. Prerequisite: MAT 1033 or MGF 1106. Special fee. Fulfills Gordon Rule computational requirement. (3 hr. lecture)

STA3164
Statistical Methods 2
3.00 credits

This course is for students majoring in data analytics, systems engineering, and related disciplines who require advanced skills in statistical analysis. Students will learn how to perform tests of variance, analysis of variance, analysis of covariance, regression, correlation, and non-parametric statistics. Prerequisite: STA2023 (3 hr. lecture; 2 hr. lab)

STA4210
Regression Analysis
4.00 credits

This course is for students majoring in data analytics, systems engineering, and related disciplines who require advanced in statistical analysis. Students will learn the principles and procedures of correlations and regression analysis and how to allocate information in data sets using statistical software. Prerequisite: STA3164. (3 hr. lecture; 2 hr. lab)

Student Life Skills

SLS1106
First Year Experience Seminar
1.00 credits

This course is designed to provide students a forum for transitioning into college. Students will learn to develop the skills required for success in college and beyond. This course is intended for first time in college students, who are seeking an Associate in Arts degree program. (1 hr. lecture)

SLS1125
Student Support Seminar
3.00 credits

This course provides a foundation for gaining knowledge, skills and attitudes necessary for college success. Students will learn specific social, cultural, psychological, and academic considerations that are known to impact student achievement. Students will also assess their competence in each of these areas, and learn strategies that will improve their overall student effectiveness. (3 hr. lecture)

SLS1130
College Survival Seminar
1.00 credits

An introduction to the campus, college policies, student services and self-discovery for entering freshmen. (1 hr. lecture)

SLS1401
Psychology of Career Adjustment
1.00 - 6.00 credits

For students who have not decided, are having difficulty deciding, or need clarification in making a career choice. A format for

a systematic investigation for career and life planning is included. It is concerned with "who you are," "where are you going," "how to get there," and "what's out there that fits you." Special fee. (1-6 hr. lecture)

SLS1502
College Study Skills
1.00 - 3.00 credits

Skills, techniques and procedures for mastering study strategies such as taking classroom and lecture notes, mastering tests, developing memory/recall, actively listening, and proper management of time. (1-3 hr. lecture)

SLS1505
College Survival Skills
1.00 credits

This is an introductory self-discovery course designed to help students make the transition to college. Students will learn the knowledge and skills necessary for success, including knowledge of academic policies and procedures, effective study strategies, and making sound academic and career choices. (1 hr. lecture)

SLS1510
Preparing for Student Success
3.00 credits

This course provides an orientation to college life and helps develop academic, career, and personal goals. Students will learn college success strategies, goal-setting, learning style assessments, as well as general and discipline-specific study skills in the context of various theoretical, practical, and experiential perspectives. (3 hr. lecture)

Surveying

SUR1001C
Construction Survey
3.00 credits

Practice of surveying as related to the building and construction industry. Includes a combination of classroom instruction and practical field problems with the tape, level and transit. Prerequisite: MAC1114 or MAC1147. (2 hr. lecture 2 hr. lab)

SUR1101C
Surveying 1
4.00 credits

The theories and practices in surveying and the use of the principal types of surveying instruments in horizontal and vertical planes. Problems include the measurement of distance; the use of compass, sextant, transit traverse, stadia, and basic mapping. Field and laboratory practice are required. Laboratory fee. Prerequisites MAC1114 or MAC1147. (3 hr. lecture 2 hr. lab)

SUR1202C
Surveying 2
4.00 credits

Advanced study in route, land, and mapping surveying to include triangulation, astronomic observations, topographic and photogrammetric mapping. Field demonstrations and surveys performed with many modern types of survey instruments. Prerequisite: SUR 1101C. Laboratory fee. (2 hr. lecture; 4 hr. lab)

Teaching English as a Second Language

TSL3080
ESOL in ECE I
3.00 credits

The student will learn to explore theories, research, and practices of English language learners, including legal issues that have influenced the field, first and second language acquisition, concepts of cultural competence and multiculturalism, and the implications of cultural and linguistic diversity in early childhood education. (Ten hours of clinical experience is required in an approved kindergarten-third grade inclusion classroom with ESOL students.). Pre/Co-requisites: EDF3115, EEC3301. Special Fee. (3 hr. lecture)

TSL3240
Applied Linguistics
3.00 credits

The student will be introduced to the analysis and classroom application of linguistic theories for first and second language acquisition and literacy development as well as the study of language

and its structure. The student will examine and apply this knowledge to enhance instruction for culturally and linguistically diverse learners. This course is restricted to in-service teacher certification candidates and is required for Florida Add-on ESOL Endorsement. (3 hr. lecture)

TSL3243
ESOL I: Second Language Acquisition, Communication, and Culture
3.00 credits

The student will learn to analyze and apply theories of first and second language acquisition, literacy development, language and its structure, ways that diverse cultures and communication styles impact learning, and legal issues related to the education of culturally and linguistically diverse learners. Fifteen hours of clinical experience are required. Pre/Co-requisites: EDG3321, EEX3120. (3 hr. lecture)

TSL3520C
Cultural Dimensions of ESOL
3.00 credits

This course provides an overview of topics related to cross-cultural communication by introducing students to the cultures of different US language groups with a focus on language groups found in Florida. The student will be introduced to an overview of topics related to cross-cultural communication and the cultures of different awareness and understanding of the complexities surrounding language, culture, and learning in order to meet the needs of linguistically and culturally diverse learners. This course restricted to in-service teacher certification candidates and is required for Florida Add-on ESOL Endorsement. (3 hr. lecture)

TSL3521
ESOL II: Communication and Culture
3.00 credits

This course provides an overview of topics related to the field of cross cultural studies and implications for instruction. The students will learn to plan and implement curriculum, instruction, and assessment activities to meet the needs of culturally and linguistically diverse learners. Fifteen hours of field experience required. (3hr. lecture)

TSL4140C
TESOL Curriculum and Materials
3.00 credits

This course provides knowledge and application of TESOL theories, principles, and current research in the analysis, planning, design, and evaluation of curriculum and materials appropriate for ESOL students. This course is restricted to in-service teacher certification candidates and is required for Florida Add-on ESOL Endorsement. (3 hr. lecture)

TSL4310
ESOL in ECE II
3.00 credits

This second TESOL course addresses the application of theories, principles, and current research on curriculum, methods, and assessment in early childhood, as well as how these are designed for children who use non-standard dialects of English and/or are learning English as an additional language. The student will learn modifications appropriate for content area teaching and learning. (Ten hours of clinical experience in an approved first through third grade setting with ESOL students). Pre-requisites: EDF3115, EEC3301, EEX3226, TSL3080. Special Fee. (3 hr. lecture)

TSL4311
ESOL II: Teaching and Assessing ESOL Students
3.00 credits

The student will learn to apply TESOL instructional methods and strategies, as well as analyze, plan, design, and evaluate curriculum and materials. The student will select, develop and adapt assessment instruments, and examine standardized ESOL measurement tools. Fifteen hours of clinical experience are required. (3 hr. lecture)

TSL4324C
ESOL Strategies for Content Area Teachers
3.00 credits

The student will learn topics related to teaching content area subjects to English Language Learners. The student will plan and implement curriculum, instruction, and assessment activities to meet the needs of culturally and linguistically diverse learn-

ers. Fifteen hours of clinical experience are required. Pre/Co-requisites: EDG3321. (3 hr. lecture)

TSL4340C
TESOL Methods
3.00 credits

The student will learn to apply TESOL theories, principles, and current research in the understanding and use instructional techniques and methodologies appropriate for teaching ESOL students. The course is required to in-service teacher certification candidates and is required for Florida Add-on ESOL Endorsement. (3 hr. lecture)

TSL4441C
ESOL Testing and Evaluation
3.00 credits

The student will learn to apply TESOL theories, principles, and current research in the selection, development, and adaptation of assessment instruments/evaluation materials appropriate for ESOL students. This course is restricted to in-service teacher certification candidates and is required for Florida Add-on ESOL Endorsement. (3 hr. lecture)

Theater Arts

THE1925
Studio Theatre Production
3.00 credits

Theoretical and practical experience with all aspects of studio theatre production including design, directing, lighting, technical and casting. The course will include faculty supervised public performances. May be repeated for credit. Prerequisite: Permission of department chairperson. (3 hr. lecture)

THE2000
Theatre Appreciation
3.00 credits

The development of drama from its beginning to contemporary theatre. Included are the analyses and study of major plays exemplary of outstanding periods of theatre history. Required of drama and drama

education majors. Fulfills Gordon Rule writing requirement. (3 hr. lecture)

THE2051
Children's Theatre Production
3.00 credits

The theory of children's theatre, its development with the American theatrical scene, its function within the American community and applications of the theories in actual productions before audiences. (3 hr. lecture)

THE2083
Theatre Problems
1.00 - 3.00 credits

This is an advanced course for theatre majors who have already earned credit in a required subject or who have demonstrated that they are capable of advanced, highly specialized work in a particular area of requirements and objectives. Possible areas of study include advanced scene work; intensive training in particular acting methods; playwriting; and directing. Students are assigned to a teacher, who will design, supervise, and evaluate their projects. May be repeated for credit. (1-3 hr. lecture)

TPA1200
Stagecraft
3.00 credits

A basic study of technical theatre practices with emphasis on scenery construction, rigging and prop construction. This course may be taken concurrently with TPP 1110. (2 hr. lecture; 2 hr. lab)

TPA1202
Introduction to Entertainment Technology
3.00 credits

An historical overview of the scope, current trends, methods and vocabulary connected with the variety of venues used for live entertainment (arenas, stadiums, discos, theater-auditorium, convention centers, casinos, recorded entertainment at film and video sound stages and music studios); the producing organizations of entertainment and their different styles of production management (sports, music film, video, dance, theater, theme parks);

and the business aspects of equipment vendors and leasing companies. An overview of theatrical unions, engineering and professional groups and their influence on standard practices will also be addressed. (3 hr. lecture)

TPA1215
Audio-Visual, Multi-Media
4.00 credits

This course presents the principles and practice of unpacking, unloading, setting up and operating visual aids for conference and convention, and A/V for industrial shows, conventions, concerts and special events. Also covered is media using recorded sound (A/V) and media accompanying live presenters (V/A) including 8, 16, 35 and 70 mm. movie, single and multimedia. Students will practice this technology in labs and in performance environment, under performance conditions. Prerequisite: Permission of department. (2 hr. lecture; 4 hr. Lab)

TPA1220
Lighting
3.00 credits

Technical theatre practices with emphasis on lighting, sound effects, and design concepts. (2 hr. lecture; 2 hr. lab)

TPA1225
Automation & Computers
3.00 credits

This course presents the principles and practices of automated robotics lighting (intelligent lighting), automated machinery, rigging, wagons, turntables, lifts, event sequencing between pyro, multi-media, sound and stage lights, automated show control of up to ninety-nine elements of production and computerize control of light and sound. Prerequisite: Permission of department. (2 hr. lecture; 2 hr. lab)

TPA1232
Theatre Costuming
3.00 credits

An introduction to three basic areas of concentration in costuming history of dress, design concepts, and building techniques. (2 hr. lecture; 2 hr. lab)

TPA1248
Makeup for the Stage
3.00 credits

An introduction to the art and techniques of makeup as used by the actor, theatrical designer, and technician. Special emphasis is given to straight makeup, age makeup, hair, character extension, and stylization. (3 hr. lecture)

TPA1253
Entertainment Technology: Technician 1
3.00 credits

This course presents the principles and practice of stage rigging, stage carpentry, road crew and gripping. Students will practice the use of hardware, knots, hemp, counter-weight and motorized flying system for scenery, curtains and ground rigging, temporary and permanent stages, sound stages or on location, expositions and/or special outdoor events. Also covered are the principles and practices of the installation and operation of wagons, winches, chain hoists and trusses, lighting equipment, sound for on-stage or studio performance, gripping for motion pictures or video production. Occupational health and safety issues are discussed and practiced. (2 hr. lecture; 2 hr. lab)

TPA1254
Entertainment Technology: Technician 2
3.00 credits

This course is an advanced course in entertainment technology and continuation of the principles and practices covered in Entertainment Technology Technician 1. (2 hr. lecture; 2 hr. lab)

TPA1255
Concert & Stage Lighting
4.00 credits

This course presents the principles and practices of installation and operation of lighting technology for a variety of entertainment venues: theater, dance, opera, rock and roll concert tours, philharmonic orchestras, music festivals, industrial shows, theme parks. Special attention will be paid to venues for performances outdoors, indoors and on sound stages. Also

covered are the principles and practices involved with the installation and operation of film studio, location gaffing and equipment technology. AC and DC electrical current will be studied as it applies to lighting technology with special emphasis on power supplies, cabling electrics, and basic maintenance of generic equipment as currently used in the field. Occupational health and safety, fire safety and CPR are discussed and practiced. Prerequisite: Permission of department. (2 hr. lecture; 4 hr. lab)

TPA1260
Concert & Stage Sound
4.00 credits

This course presents the principles and practices of the installation and strike of sound technology for a variety of entertainment venues: theater, dance and opera, rock and roll concert tours, orchestras, choirs and music festivals, theme parks, themed entertainment and industrial shows, special events, casino and cruise line shows. Special attention is paid to venues for performances outdoors, indoors and on sound stages. Also covered are the principles and practices associated with the installation and operation of film studio, location sound and sound studio set-up technology. Emphasis is placed on equipment and its specific use in the field together with practice in cabling, patching, system layout rigging and basic maintenance of generic equipment. Occupational health safety, fire safety issues and CPR are discussed and practiced. Prerequisite: Permission of department. (2 hr. lecture; 4 hr. lab)

TPA1274
Properties Practical's Non-Electrified
Special Effects
3.00 credits

This course provides the student: the principles and practice of unloading, installing, pre-setting operating, striking, storing, loading and packing properties, practical's, physical effects and set dressing; the preparation, care and handling and clean-up of food used during a live performance and filming; the preparation, pre-set/strike, organization and storage of properties

before, during and after performance and film shots. Students learn how to take instructions from management, designers and decorators for the installation and running for furniture, dressing and effects and executing cues for their movement and operation. Prerequisite: Permission of department. (2 hr. lecture; 2 hr. lab)

TPA1275
Special Effects-Electrified Laser &
Pyrotechnics
3.00 credits

This course presents the principles and practice of operating scenic, mechanical, sound, and lighting special effects including laser light and pyro-technics. Also covered are the standard practices, rules, regulations, procedures, guidelines and precautions for the safe operation of currently available devices used in industry today and those invented or special events. Prerequisite: Permission of department. (2 hr. lecture; 2 hr. lab)

TPA2233
Main stage Production-Costumes &
Makeup
1.00 credits

Practical experience in theatrical costuming and makeup through participation in a major theatrical production. May be repeated for credit. Prerequisite: Permission of department chairperson. (2 hr. lab)

TPA2256
Costumes & Makeup
3.00 credits

This course presents the principles and practices of unloading, receiving, unpacking and distributing costumes, wigs and accessories for live performances and the load-out duties of collecting and packing the same, and the equivalent duties for on-location trailers and/or studio wardrobe. Perform costume changes as well as other reshoot and post production set-ups and strikes. Perform maintenance duties including laundry, repair, dyeing, starching, spot cleaning, ironing, pressing, steaming, shoe repair and painting, gluing, hand and machine sewing, embroidery, millinery pattern making, tailoring/alterations, leather work, beading and other costume crafts.

The principles of make-up for the stage, studio and screen and preparation and maintenance of wigs, falls, and other hair pieces including beards and mustaches is also practiced. Taking instructions from management, designers, and supervisors, executing clues, collaborating with others part of a crew has equal emphasis along with.

TPA2276
Entertainment Technology: Crafts 1
3.00 credits

This course presents the principles and practices of woodworking, welding, smithing, casting, weaving, paperhanging, painting, ceramics, plaster sewing and plastics technology for the entertainment industry. State of the art tool technology, shop and field practice, health and safety standards will be emphasized. These crafts are entertainment industry oriented with a perspective that states that objects created are to be used for production. Prerequisite: Permission of department. (2 hr. lecture; 2 hr. lab)

TPA2277
Crafts 2
3.00 credits

This course is a continuation of the study of the principles and practices covered in Crafts 1. Prerequisite: TPA 2276 or departmental permission. (2hr. lecture; 2 hr. lab)

TPA2291
Main stage Production-Technical &
Lighting
1.00 credits

Practical application of theatrical skills in technical support, and lighting through participation in a major theatrical production. May be repeated for credit. Prerequisite: Permission of department chairperson. (2 hr. lab)

TPA2292
Production Lab
1.00 - 3.00 credits

Students will be provided with hands-on experience in theatre technology and production, including lighting; the construction of scenery; stage make-up; costume construction; actual production

management; properties construction and organization; sound production; recording, editing, and operation; and house management during actual performances. Required of all first-year students. (2-6 hr. lab)

TPA2600
Introduction to Stage Management
3.00 credits

Introduction to Stage Management is designed to familiarize the student with the role of the stage manager in the theatre. Concepts covered includes: blocking, note taking, cue calling and company relation skills. Prerequisites: TPA 1200, 1220. (3 hr. lecture)

TPP1100
Acting 1
3.00 credits

The fundamentals of stage performance, stressing voice, movement, and the more formal and technical aspects of the actor's art. May be repeated for credit. (3 hr. lecture)

TPP1110
Acting 1
3.00 credits

Continuation of TPP 1100. Prerequisite: TPP 1100. (3 hr. lecture)

TPP1120
Improvisation Ensemble
3.00 credits

The student will develop the skills of improvisation for use in role development and for performance. (3 hr. lecture)

TPP1150
Scene Study 1
3.00 credits

This course teaches the aspiring young theatre professional how to analyze a play in terms of the author's personal statement, the historical and social context within which it was written, the particular style used by the author, and the many options open to director and actor for bringing the work to stage life. A substantial portion of class time will be devoted to oral reading and interpretation of text. (1-3 hr. lecture)

TPP1160
Voice & Movement 1
3.00 credits

An intense two-semester course designed to train the acting student in specific techniques of voice production, vocal range and control; to add flexibility and suppleness to body movement, so that the actor becomes free to concentrate on the task of building a character. Each participant is evaluated at the beginning in relation to voice and movement levels of professional acceptability and expected to demonstrate measurable growth in a personalized program. (3 hr. lecture)

TPP1161
Voice & Movement 1
3.00 credits

Continuation of TPP 1160. Prerequisite: TPP 1160. (3 hr. lecture)

TPP1170
Beginning Characterization
3.00 credits

A course which builds upon the centered foundation of creating a role developed in TPP 1100 and TPP1110. The student uses a subjective approach to creating a character which differs from him/her physically, culturally and psychologically. He/she attempts ever greater degrees of transformation. Prerequisite: TPP 1110. (3 hr. lecture)

TPP1190
Studio Theatre-Cast
1.00 credits

Practical application of skills acquired in acting classes through public presentation of student-produced studio theatre as a member of the cast. May be repeated for credit. Prerequisite: Permission of department chairperson. (2 hr. lab)

TPP1250
Musical Theatre 1
3.00 credits

The study and performance of musical comedy excerpts with special attention to stage movement, acting and characterization as related to musical production. May be repeated for credit. Prerequisite: Permission of department chairperson; corequisite: previous or current enrollment

in Voice Techniques and Jazz Techniques classes. (1 hr. lecture; 2-4 hr. lab)

TPP1260
Acting for Camera 1
3.00 credits

Acting students will learn to acquire the technical knowledge and training necessary for acting in the film and television industry. Students will also acquire knowledge of the working procedure used in this media.

TPP1606
Playwriting 1/2
3.00 credits

The process of exploring playwriting styles and techniques is continued. A one-act play of significant length and complexity will be the semester project. (3 hr. lecture)

TPP1700
Voice for the Stage
3.00 credits

The study and application of voice production, breathing, articulation, accents and movement in the actor's delivery. Emphasis is on clarity, precision, properly phrased and meaningful communication from the performer to the audience. (3 hr. lecture)

TPP2111
Acting 2
3.00 credits

In this course, actors who have learned to express themselves freely now learn to adjust this expression to the demand of the role. Students begin to apply their skills for observation, imagination, and concentration to the study of roles close to themselves. Vocal and physical flexibility and expressiveness are now put to work in the realization of expectations of the playwright, here the student develops a systematic approval to creating a three-dimensional character. (3 hr. lecture)

TPP2112
Acting 2
3.00 credits

Emphasis on building a characterization. The art of improvisation, with reference to its function in the preparation of a role,

is included. Prerequisite: TPP 1110. (3 hr. lecture)

TPP2151
Advanced Scene Study
3.00 credits

In this course the theatre student learns to analyze plays with a heavy focus on particular characters and major scenes. Emphasis will be placed on works of prime importance in the history of the theatre, both past and present, so that the aspiring actor can begin to experience some of the problems involved in approaching a significant role. Each student is required to research the performance history of the roles and scenes studied as well as to uncover the subtexts and the inner line of character development. Attention will be given to both Stanislavsky and improvisation techniques as methods by which the actor comes closer to the full reality of a part. May be repeated for credit. (3 hr. Lecture)

TPP2152
Scene Study 3
3.00 credits

This course is the culmination of a sequence. In it the advanced acting student learns how to analyze the longer one/act or shorter full-length play and to develop the through-line of one character as a preparation for an in-class performance. The student also learns how to work with the director and to relate acquired acting techniques to the stylistic requirements of a given script. (3 hr. lecture)

TPP2162
Voice & Movement 2
3.00 credits

An intense two-semester course in precision techniques of voice production and bodily flexibility integrating them with specific acting exercises with an emphasis on demonstrating the automatic, non-conscious application of acquired voice and movement skills. Prerequisite: TPP 1161. (3 hr. lecture)

TPP2163
Voice & Movement 2
3.00 credits

Continuation of TPP 2162. Prerequisite: TPP 2162. (3 hr. lecture)

TPP2191
Main stage Production - Cast
1.00 - 3.00 credits

Participation in a major theatrical production as a member of the cast. Main stage productions will be presented publicly to the student body and community. May be repeated for credit. Prerequisite: Permission of department chairperson. (2-6 hr. lab)

TPP2256
Musical Theatre 2
3.00 credits

A continuation of TPP 1250 in which the student is expected to develop further the performing skills of singing, dancing, and acting. (3 hr. lecture)

TPP2260
Acting for the Camera 1
3.00 credits

Acting students will attend lecture/lab to acquire the technical knowledge and training necessary for acting in the film and television industry. They will acquire a knowledge of the working procedure and terminology used in these media. Prerequisite: TPP 1100 or permission of the instructor. (2 hr. lecture; 2 hr. lab)

TPP2300
Introduction to Play Directing
3.00 credits

Introduction to the basics of play directing, composition, picturization, business and movement. The course will offer the student a method of analysis and rehearsal scheduling. Prerequisite: TPP 1110 and TPA 1200. (3 hr. lecture)

TPP2303L
Main stage Production-Assistant Designer/Director
1.00 credits

Practical experience in theatrical design and directing through participating in a major production. May be repeated for

credit. Prerequisite: Permission of department chairperson. (2 hr. lab)

Transportation and Traffic Management

TRA1410
Introduction to Rail Freight Operations
3.00 credits

This is an introductory course in Rail Freight Operations. Students will learn the advantages and disadvantages of freight movement by rail, how rail lines are organized and operate, including the use of intermodal transfer facilities and on-dock rail. Topics include shipping documents, shipment tracking, management of human resources and equipment, and an overview of hazardous materials shipments and security issues. Co-requisites: TRA1420, 1430. (3 hr. lecture)

TRA1420
Introduction to Trucking Operations
3.00 credits

This is an introductory course in Trucking Operations and the movement of goods via highways and roadways. Students will learn U.S. Department of Transportation requirements, documents for shipping, vehicle and shipment tracking, scheduling, management of human resources and equipment, just-in-time implications and integration with other transportation modes. Hazardous materials shipments and security issues will be discussed. Co-requisites: TRA1410, 1430. (3 hr. lecture)

TRA1430
Introduction to Port Freight Operations
3.00 credits

This is an introductory course in Port Freight Operations. Students will learn how Seaports and Inland Ports are organized and operate, how freight is moved domestically and internationally, including the integration of port operations with other modes of transportation. Topics include break-bulk handling during loading, discharging, in-transit carriage, on-dock rail,

harbor drayage, equipment and cargo management, and an overview of hazardous materials shipments and security. Co-requisites: TRA 1410, 1420. (3 hr. lecture)

TRA2010 **Introduction to Transportation and Logistics**

3.00 credits

This course surveys the organization and operations of the commercial transportation industry and its impact on the bottom line of today's modern businesses. Students will learn to review regulations and processes affecting transportation and logistics functions as well as explore the industry job market and look at technologies and current issues shaping transportation and logistics. A.S. degree only. (3 hr. lecture)

TRA2156 **Operations Management for Transportation**

3.00 credits

This course includes the skills necessary for a supervisory role in logistics. Students will learn the roles and responsibilities in managing different types of transportation operations. Topics include human resources, design and management of production operations, productivity, capacity planning, resource management, just-in-time systems, hazardous materials management, planning and project management. Prerequisite: MAN2021. (3 hr. lecture)

TRA2321 **Transportation Public Policy, Law, and Regulations**

3.00 credits

Students will learn the transportation regulatory environment including the various levels of government regulations. Review of security, environmental requirements, regulatory research and labor laws are also covered. Prerequisite: TRA2010. (3 hr. lecture)

TRA2402 **Intermodal Transportation Operations and Project Management**

3.00 credits

Students will learn the fundamental elements necessary to plan, implement and control efficient and market-responsive integrated transportation systems. Topics include strategic, operational, and project management roles of transportation in supply chains. Emphasis is placed on services pricing, carrier selection, equipment and shipment planning, intermodal operations, financial/budgetary constraints, security and distribution services. Prerequisites: AVM2120, TRA2010. Co-requisites: TRA1410, 1420, 1430. (3 hr. lecture)

TRA2702 **International Logistics and Transportation**

3.00 credits

International logistics concerns the flow of materials into, through and out of an international corporation as it relates to materials management, storage, inventory locations, physical distribution and documentation. This course will emphasize international transportation infrastructure and modes such as ocean, airfreight, intermodal movement, truck and rail. Choices among these modes will be explored considering such factors as transit time, packaging, risks, predictability and cost. The roles of freight forwarders and custom brokers in moving international cargo and operation of foreign trade zones will be discussed. Prerequisites: TRA 2010, 2321. (3 hr. lecture)

TRA2945 **Transportation & Logistics Capstone I**

1.00 credits

In this Transportation & Logistics Capstone course, students will learn to incorporate the major concepts presented in the transportation courses through the application of special projects, internship and/or examination. The course will assess the students understanding of major concepts in transportation and logistics. Prerequisites: Departmental Approval & Completion of the Program Core Requirements. (1 hr. lecture)

TRA2946 **Transportation & Logistics Capstone II**

1.00 credits

This Transportation & Logistics course is a continuation of Capstone I. Students will learn to further the concepts acquired in Capstone I through a special project, internship or examination to assess the students understanding of major concepts presented in the courses in the degree program. Prerequisite: TRA2945. (1 hr. lecture)

TRA3034 **Transportation and Traffic Management**

3.00 credits

This course covers developments leading to national and federal regulations, division of territories, official descriptions, etc. Students will learn the scope of authority of territorial associations, factors controlling traffic flows, basic governing classification rules, principals of freight rates and tariffs, and elements of rate making. Prerequisites: MAN 2021 and TRA 1154. (3 hr. lecture)

TRA3132 **Purchasing and Inventory Management**

3.00 credits

This course provides a comprehensive introduction to the purchasing/procurement and supply chain management field. Students will learn purchasing and supply chain issues in a variety of settings, from process industries to high tech manufacturing and services as well as public institutions. Emphasis is on the purchasing process as it relates to such topics as inventory control procedures, price/cost analysis, laws and ethics, negotiations, vendor selection and the development of vendor relationships. Prerequisites: MAN 2021 and TRA 1154. (3 hr. lecture)

TRA4234 **Warehouse Management**

3.00 credits

Students will learn warehousing functions, facility operations, and operational productivity improvements and measurements with the inclusion of concepts from marketing,

finance, statistics, operations management, and human resources. The course presents an integrated business approach to the detailed operational aspects of logistics facilities such as warehouse and distribution centers. The course will use real-world warehouse data to design the layout and operations requirements for a local warehousing facility and to identify the operational equipment used in warehousing. Prerequisites: MAN 2021, 3065, QMB 2100, and 2100L. (3 hr. lecture)

Travel Industry Management

HFT1454 **Food and Beverage Cost Controls** **3.00 credits**

Covers the principles and procedures involved in an effective food and beverage control system, including standards determination, the operation budget, income and cost control, menu pricing, and computer applications. (3 hr. lecture)

HFT1949 **Co-op Work-study Internships I** **3.00 credits**

This is a course designed to continue training in student's fields of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op department approval. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Cooperative Education Office to obtain registration approval. A.S degree only. (3 hr. lecture)

HFT2949 **Co-op Work-study Internships 2** **3.00 credits**

In this intermediary course the student will continue learning and training in students' field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op department approval and completion of 1949 Co-op work experience. In addition to the above the student keep a

portfolio of required materials that they obtain during the course of their study. (3 hr. lecture)

Vision Care Technology/Opticianry

OPT1110 **Physical & Geometrical Optics** **4.00 credits**

Behavior of light energy as it passes through air, plastic, glass and water with emphasis on how light is modified by prism and curved lens surfaces. These principles relate to the effect these ophthalmic devices have in correcting the errors of human vision. Corequisite: OPT 1205, 1330. (4 hr. lecture)

OPT1150 **Ophthalmic Lenses** **2.00 credits**

Characteristic of unifocal and multifocal lens reference points for proper lens selection to meet visual needs of the patients. Emphasis is on accurate positioning of the optical centers and selected multi-focal addition design. ANSI and FDA standards; prescription ordering; verification procedures; absorptive lenses; and invisible and progressive multi-focals are presented. Prerequisites: OPT 1110, 1205; corequisites: OPT 1331, 1331L. (2 hr. lecture)

OPT1205 **Ocular anatomy, Physiology & Pathophysiology** **3.00 credits**

The structure and function of the systems of the human body, emphasizing the anatomy, physiology and pathophysiology of the human eye. Visual recognition of common eye disorders is also discussed. Corequisite: OPT 1330. (3 hr. lecture)

OPT1330 **Clinical Data Collection 1** **2.00 credits**

Techniques necessary in a clinical environment for the collection of patient case history, entrance visual acuity, basic visual skills of ocular mobility and accommodation, color discrimination, depth percep-

tion and binocular fusion. Emphasis is also placed on gaining familiarity with the medical terminology as it relates to the visual system. Corequisites: OPT 1110, 1205. (2 hr. lecture)

OPT1331 **Clinical Data Collection 2** **2.00 credits**

Techniques necessary in a clinical environment for the collection of subjective and objective patient diagnostic information including visual field plotting, tonometry, lensometry, keratometry, and sphugmomanometry. Prerequisites: OPT 1150, 1331L. (2 hr. lecture)

OPT1331L **Clinical Data Collection 2 Laboratory** **1.00 credits**

Laboratory for OPT1331 in which students are under the supervision of a licensed practitioner. Corequisite: OPT 1331. Laboratory fee. (2 hr. lab)

OPT1450 **Ophthalmic Dispensing Procedures 1** **1.00 credits**

Basic procedures of ophthalmic dispensing such as frame selection, measurement and laboratory ordering. Emphasis will be placed on common ophthalmic frame materials; crown glass and CR-39 lenses; absorptive lenses; and frame alignment, adjustment and repair. The student will demonstrate skills necessary for entry level ophthalmic dispensing in Vision Care Clinic. Prerequisite: OPT 1330; corequisites: OPT 1331, 1331L, 1450L. (1 hr. lecture)

OPT1450L **Ophthalmic Dispensing Procedures 1 Laboratory** **1.00 credits**

Laboratory for OPT 1450. Corequisite: OPT 1450. Laboratory fee. (2 hr. lab)

OPT2060 **Ophthalmic Management Policy & Procedures** **2.00 credits**

Procedures and terminology used in the handling of patients, correspondence, legal and ethical principles, inter- and

intra-professional relationships, and office management. Develop feasibility report of opening a retail ophthalmic dispensary. The history of opticianry, optometry and ophthalmology is traced. Special emphasis is on a comprehensive review of the curriculum. Prerequisite: OPT 1330, 2800L. (2 hr. lecture)

OPT2070L
Computers for Vision Care
1.00 credits

This course introduces students to the use of computers in ophthalmic practice. Students will learn computer basics and the use of application software for maintaining patient records and billing. Elements of ophthalmic coding are included. (2 hr. lab)

OPT2375
Refractometry
1.00 credits

Students will learn the basic principles of refractometry, theoretical aspects of retinoscopy, and the use of cross cylinders. Students will be able to describe various refractive problems and their solutions. Prerequisites: OPT 1150, 1205, 1331, 1331L; corequisite: OPT 2375L. (1 hr. lecture)

OPT2375L
Refractometry Laboratory 1
1.00 credits

Students will practice theoretical concepts of refractometry using a retinoscope, auto-refractor, and cross cylinders in a laboratory setting. Prerequisites: OPT 1205, 1331, 1331L; corequisites: OPT 2375. (2 hr. lab)

OPT2376L
Refractometry Lab 2
1.00 credits

This course is designed to provide the student with the hands on experience of hand neutralizing a pair of glasses, retinoscopy, and the use of the phoropter and the Snellen chart. (2 hr. lab)

OPT2377L
Refractometry 3 Laboratory
1.00 credits

This laboratory course will continue to advance the skills already introduced in the

previous laboratories 1 & 2. The improved skills will enhance the student's ability to determine the refractive status of the eye and be able to practice these skills on patients in the clinic. (2 hr. lab)

OPT2420
Eyewear Fabrication 1
2.00 credits

Theory of ophthalmic surfacing procedures. Students acquire knowledge to arrange single vision lenses; use lensometers and lens clock; operate project-o-makers for single vision lens layout; select or fabricate frame patterns; and utilize several systems for edging lenses for ophthalmic frames. Prerequisite: OPT 1150; corequisites: OPT 1450, 1450L, 2420L, 2505. (2 hr. lecture)

OPT2420L
Eyewear Fabrication 1 Laboratory
1.00 credits

Laboratory for OPT 2420. Corequisite: OPT 2420. Laboratory fee. (2 hr. lab)

OPT2421C
Eyewear Fabrication 2
3.00 credits

Advanced techniques in measurement, fabrication, and verification of unifocal and multifocal lenses. Students fabricate finished eyewear from written specifications ensuring that current ANSI and FDA standards are exceeded. Prerequisites: OPT 2420, 2420L. (1 hr. lecture; 4 hr. lab)

OPT2422C
Eyewear Fabrication 3
3.00 credits

A continuation of OPT 2421. Theory of evaluation and analysis of eyewear for accuracy and quality. Advanced techniques in operation of automated lens analyzer and lens edger's, and maintenance of equipment. Prerequisites: OPT 2420, 2421C. (1 hr. lecture; 4 hr. lab)

OPT2451
Ophthalmic Dispensing Procedures 2
1.00 credits

Theory and terminology of advanced ophthalmic dispensing. Emphasis will be placed on new technology in ophthalmic frame materials; multifocal lenses

including progressive power and blended bifocals; and high index lenses. The process of analyzing the patient's specific needs for the proper frame and lens selection is highlighted. Prerequisites: OPT 1450, 1450L; corequisite: OPT 2451L. (1 hr. lecture)

OPT2451L
Ophthalmic Dispensing Procedures Laboratory
1.00 credits

Laboratory for OPT 2451. Corequisite: OPT 2451. Laboratory fee. (2 hr. lab)

OPT2505
Contact Lenses 1
3.00 credits

Basic principles of contact lens fitting, emphasizing soft lenses. Topics include lens-relate terminology, anatomy and physiology, patient examination, soft lens materials, design, parameters, handling, fitting and care. Includes introduction to rigid lenses. OPT 1110, 1205. (3 hr. lecture)

OPT2506
Contact Lenses 2
2.00 credits

Principles of contact lens fitting, emphasizing rigid lenses. Topics include materials, design parameters, verification, handling, fitting and care. Considers advanced and specialty design and ocular complications. Prerequisite: OPT 2505. (2 hr. lecture)

OPT2506L
Contact Lenses 2 Lab
1.00 credits

Practical procedures designed to apply technical skills of contact lens application and removal, verification of the contact lens prescription, modification of hard and hard gas permeable contact lenses, and other skills discussed in previous lecture coursework. Prerequisite: OPT 2505; corequisite: OPT 2506. (2 hr. lab)

OPT2800L
Vision Care Clinic 1
2.00 credits

Introductory clinic designed to apply technical skills acquired in previous course work.

Recording of clinical data, administrative procedures and techniques in patient handling under close staff supervision. Prerequisites: OPT 1331, 1331L, 1450, 1450L. Laboratory fee. (6 hr. lab)

OPT2801L
Vision Care Clinic 2
4.00 credits

Development of skills in patient reception, clinical data collection, assisting clinician, and ophthalmic dispensing. This is an opportunity to follow the patient through the entire cycle of vision care under close supervision of the clinical staff. Prerequisite: OPT 2800L. Laboratory fee. (192 hr. Clinical)

OPT2802L
Vision Care Clinic 3
4.00 credits

Development of additional skills in visual fields, tonography, ocular photo documentation, vision therapy/orthoptics, low vision, aseptic techniques, eye emergencies, and assisting in triage and laboratory diagnosis of external eye disease. On and off-campus clinics will be utilized under the close supervision of optometrists and ophthalmologists. Prerequisite: OPT 2801L; corequisite: OPT 2060. Laboratory fee. (12 hr. clinic)

OPT2830C
Contact Lenses Clinic 1
2.00 credits

Observe and assist an optometrist in the initial fitting and follow-up care of rigid and soft contact lenses for patients referred from the Vision Care Clinic when conventional eyewear will not suffice. Familiarization with the instructions for lens handling, cleaning, care and storage of contact lenses. Prerequisites: OPT 2506, 2506L. Laboratory fee. (4 hr. clinic)

OPT2831L
Contact Lenses Clinic 2
1.00 credits

Use of the soft contact lens instruments to confirm all the parameters for replacement lens. Particular attention is devoted to the patient that is having problems with contact lenses after long-term wear

due to corneal changes and sensitivity to solutions under direct supervision of an optometrist. Prerequisite: OPT 2830C. Laboratory fee. (3 hr. clinic)

OPT2875L
Ophthalmic Dispensing Practicum 1
2.00 credits

Externship in an approved finishing laboratory of a retail ophthalmic dispensing establishment. The student will gain a working knowledge of ophthalmic frame and lens stock, inventory system, layout and blocking, chemical and heat treating, edging, tinting assembly and alignment of eyewear according to the written prescription. Prerequisites: OPT 2420, 2420L, 2451, 2451L; corequisite: OPT 2801L. (6 hr. lab)

OPT2876L
Ophthalmic Dispensing Practicum 2
2.00 credits

Externship in an approved retail ophthalmic dispensing establishment in the area of frame styling, ordering of appropriately designed lenses, adjustment, repair and dispensing of eyewear. The student will gain a working knowledge of administrative management procedures of the practice. Prerequisite: OPT 2875L. (6 hr. lab)

Educator Preparation Institute

EPI0001
Classroom Management
3.00 credits

The student will learn how to plan, intervene, and evaluate behavior management strategies that create a positive P-12 learning environment that is requisite to increase student learning. The student will learn to apply the student code of conduct, as well as match disciplinary action to undesirable behaviors which impede the teaching and learning process. Ten hours of clinical experience are required. (3 hour lecture)

EPI0002
Instructional Strategies
3.00 credits

The student will learn to connect human developmental theories and current educational neuroscience research to the planning of instructional activities for students in P-12 settings. The student will learn to apply varied teaching strategies, develop questions that address all levels of the cognitive domain, create lesson plans to include objectives, anticipatory set, practice, and assessment, as well as to research professional literature to hone the craft of effective teaching. Pre-requisites: EPI0001, or an equivalent course. (3 hour lecture)

EPI0003
Technology
3.00 credits

The student will learn about the historical, legal, and developmental implications of utilizing instructional technology to teach P-12 students. Students acquire knowledge regarding Assistive Technology and will integrate Assistive Technology to meet the needs of students with special educational needs. Students will select the best technology applications for the classroom. The student will apply current research to teaching and learning with technology when planning learning activities. Prerequisites: EPI0002 (3 hr. lecture)

EPI0004
The Teaching & Learning Process
3.00 credits

The student will learn the philosophies of major educational theorists and the application to the P-12 teaching and learning process. The student will learn to develop lessons which include tier-based instruction, strategies for enrichment and differentiation, as well as differentiated and alternative assessments. The student will learn to develop his/her own philosophy of education. Ten hours of clinical experience are required. Prerequisites: EPI0002 (3 hour lecture)

EPI0010
Foundations of Research-Based Practices in Reading
3.00 credits

The student will learn about the reading process and reading instruction from P-12. In addition, the student will examine educational neuroscience research related to the reading process, as well as research-based approaches and theories related to all components of the reading process: phonemic awareness, phonics, vocabulary, fluency, oral language, and comprehension. An assessment of the students teaching performance will be conducted. Content covers Competency 2 and 4 of the 2010 Reading Competencies. Fifteen hours in the clinical setting are required. Pre-requisites: EPI0001, and EPI0002, and EPI0004 (3 hr. lecture)

EPI0020
Professional Foundations
1.00 credits

The student will learn to evaluate his/her role as a productive member of the teaching profession. The student will learn to reflect on his/her development and

mastery of the Pre-Professional Florida Educator Accomplished Practices during the completion of the Clinical Education experience in a P-12 classroom setting. Pre-requisites: EPI0002 (1 hour lecture)

EPI0030
Diversity
2.00 credits

The student will learn the complexities surrounding the cultural, linguistic, and exceptional needs of P-12 learners. The student will learn about legal mandates, ethical issues, implications for classroom implementation, and best practices for instructional strategies and maintenance of safe, inclusive, and diverse learning environments. The student will learn to make researched-based decisions through designing and adapting the curriculum, as well as the learning environment to meet the needs diverse student population. Pre-requisites: EPI0002 (2 hr. lecture)

EPI0940
Field Experience II
2.00 credits

The student will observe effective teaching/learning techniques in P-12 settings

with diverse learners to collect and analyze observational data, and also plan/implement teaching strategies that meet the individual needs of all learners. A formal observation/assessment of the students teaching performance will be conducted. Thirty hours in a clinical setting is required. Pre-requisites: EPI0001, and EPI0002, and EPI0003, and EPI0010, and EPI0030 (2 hr. lecture)

EPI0945
Field Experience I
1.00 credits

The student will observe effective teaching/learning techniques in P-12 settings with diverse learners to collect and analyze observational data, and also plan/implement teaching strategies that meet the needs of all learners. A formal observation/assessment of the students teaching performance will be conducted. Fifteen hours in a clinical setting are required for successful completion of this course. Pre-requisites: EPI0001, and EPI0002, and EPI0004, and EPI0010, and EPI0030 (1 hr. lecture)

CAREER TECHNICAL COURSES

Miami Dade College Career Technical Certificate programs are designed for immediate job entry. The career technical courses are listed in alphabetical order according to prefix and number (or suffix).

Accounting

ACO0101
Accounting 1
2.50 credits

This course emphasizes double-entry book-keeping; methods and principles of recording business transactions; the preparation of various documents used in recording income, expenses, acquisition of assets incurrence of liabilities, and changes in equity and the preparation and basic interpretation of financial statements. Special fee. (75 contact hrs.)

ACO0102
Accounting 2
2.50 credits

This course is designed to continue the study of accounting principles. Topics include depreciation, inventory, accruals, deferrals, notes, payroll, and tax-related forms. Computer application will be provided. Special fee. (75 contact hrs.)

ACO0111
Accounting (Lab) Applications
1.00 credits

This course is intended to provide additional time on task for students who are attempting to fulfill the requirements

of the Accounting Operations Certificate Program. The course is individualized according to each student's need. Special fee. (30 contact hrs.).

ACO0202
Accounting (Lab) Applications 2
1.00 credits

This course is intended to provide additional time on task for students who are attempting to fulfill the requirements of the Accounting Operations Certificate Program. The course is individualized according to each student's need. Special fee. (30 contact hrs.)

ACO0511
Microcomputers in Bookkeeping and Business

2.50 credits

This course is concerned with the use of microcomputers for accounting applications. It includes the preparation, interpretation, and use of microcomputer information in financial decision making. Other business applications will be explored. Special fee. (75 contact hrs.)

ACO0751
Income Tax Accounting

2.50 credits

This course provides the student with an overview of the federal income tax system, presents the accounting procedures and rules that need to be understood to minimize the tax amount due to the government, within the tax laws. Special fee. (75 contact hrs.)

ACO0752
Business Forms

2.50 credits

An introduction to federal, state and local forms that must be filed by most businesses, including payroll returns and sales taxes. Special fee. (75 contact hrs.)

ACO0948
Co-op Work Experience: ACO

1.00 - 3.00 credits

This is a course designed to continue training in a student's field of study through work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-Op Departmental approval and completion of ACO 0948 Co-Op Work Experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the Co-Operative Educational Office to obtain registration approval. Special fee. (30-90 contact hrs.)

Apprenticeship - Electricity

BCA0350
Electricity 1

3.00 credits

This course provides students with a foundation in electrical theory, electrical safety, OSHA standards, and mathematical principles and formulas for the electrical industry. (90 contact hrs.)

BCA0351
Electricity 2

3.00 credits

This course presents the National Electrical Code (NEC) and its application to electrical wiring. Students are also introduced to various types of test equipment, fittings, conductors, blueprints, and residential and commercial wiring. (90 contact hrs.)

BCA0352
Electricity 3

3.00 credits

Circuits, current, and motor theory and application are presented. The student also learns about grounding, conduit systems, and conductor installations. (90 contact hrs.)

BCA0353
Electricity 4

3.00 credits

This course presents techniques for cable tray assembly and installation, crimping and splicing cable, and installation of various types of electrical services. Students also learn about circuit breakers and fuses, contactors and relays, as well as lighting and lighting fixtures. (90 contact hrs.)

BCA0354
Electricity 5

3.00 credits

This course focuses on calculating loads and conductors. It also presents information on requirements for overcurrent protection, outlet and junction boxes, and wiring devices. (90 contact hrs.)

BCA0355
Electricity 6

3.00 credits

Students are provided with information on transformer operations and principles of light. Motor calculations, maintenance,

and controls are also presented. (90 contact hrs.)

BCA0356
Electricity 7

3.00 credits

This course provides skills in calculating loads and circuits for various types of electrical systems. It offers the first part in a two-part series on motor maintenance. It also presents information on basic electronic theory, standby and emergency systems, fire alarm systems, and specialty transformers. (90 contact hrs.)

BCA0357
Electricity 8

3.00 credits

This is the second part of a two-part series on motor maintenance. It also presents the topics of advanced controls, and heating, ventilation, and air conditioning controls. (90 contact hrs.)

BCA0358
Electricity Co-op 1

18.13 credits

This a Year One, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the electricity Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0359
Electricity Co-op 2

18.13 credits

This a Year One, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0360
Electricity Co-op Summer 1
30.40 credits

This a Year One, Summer One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

BCA0361
Electricity Co-op 3
18.13 credits

This a Year Two, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0362
Electricity Co-op 4
18.13 credits

This a Year Two, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0363
Electricity Co-op Summer 2
30.40 credits

This a Year Two, Summer Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide stu-

dents the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

BCA0364
Electricity Co-op 5
18.13 credits

This a Year Three, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0365
Electricity Co-op 6
18.13 credits

This a Year Three, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0366
Electricity Co-op Summer 3
30.40 credits

This a Year Three, Summer Three, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

BCA0367
Electricity Co-op 7
18.13 credits

This a Year Four, Semester One, coordinated work-study program that reinforces the educational and professional growth

of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0368
Electricity Co-op 8
18.13 credits

This a Year Four, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0369
Electricity Co-op Summer 4
30.40 credits

This a Year Four, Summer Four, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

Apprenticeship - Fire Sprinkler

BCA0470
Fire Sprinkler 1
2.67 credits

This course provides an introduction to the Fire Sprinkler Fitter Trade and introduces workplace safety, materials, common tools, and other topics necessary for the first semester apprentice. (80 contact hrs.)

BCA0471
Fire Sprinkler 2
2.67 credits

This course continues the topics introduced in Fire Sprinkler 1, and identifies and describes various types of tubing and pipe systems. (80 contact hrs.)

BCA0472
Fire Sprinkler 3
2.67 credits

This course provides information on various types of sprinkler systems for the second year apprentice. (80 contact hrs.)

BCA0473
Fire Sprinkler 4
2.67 credits

This course identifies and describes the purpose and operation of wet fire sprinkler systems and dry pipe fire sprinkler systems. (80 contact hrs.)

BCA0474
Fire Sprinkler 5
2.67 credits

This course provides an understanding of the planning and design of the fire sprinkler systems and the mathematics used to perform sprinkler system design and installation for the third year apprentice. (80 contact hrs.)

BCA0475
Fire Sprinkler 6
2.67 credits

This course continues the planning and design of the fire sprinkler systems, with emphasis on supply systems. (80 contact hrs.)

BCA0476
Fire Sprinkler 7
2.67 credits

Information on special extinguishing systems and fire pumps is presented in this course for fourth year apprentices. (80 contact hrs.)

BCA0477
Fire Sprinkler 8
2.67 credits

This course continues special extinguishing systems with basic hydraulic concepts,

system design, and hydraulic calculations. An introduction to foremanship, documentation and tracking is included. (80 contact hrs.)

BCA0480
Fire Sprinkler Co-op 1
18.13 credits

This is a Year One, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Fire Sprinkler Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0481
Fire Sprinkler Co-op 2
18.13 credits

This is a Year One, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Fire Sprinkler Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0482
Fire Sprinkler Co-op Summer 1
30.40 credits

This a Year One, Summer One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

BCA0483
Fire Sprinkler Co-op 3
18.13 credits

This is a Year Two, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in

classroom instruction and field experience for the Fire Sprinkler Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0484
Fire Sprinkler Co-op 4
18.13 credits

This is a Year Two, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Fire Sprinkler Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0485
Fire Sprinkler Co-op Summer 2
30.40 credits

This a Year Two, Summer Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Electricity Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

BCA0486
Fire Sprinkler Co-op 5
18.13 credits

This is a Year Three, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Fire Sprinkler Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0487**Fire Sprinkler Co-op 6****18.13 credits**

This is a Year Three, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Fire Sprinkler Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0489**Fire Sprinkler Co-op 7****18.13 credits**

This is a Year Four, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Fire Sprinkler Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0490**Fire Sprinkler Co-op 8****18.13 credits**

This is a Year Four, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Fire Sprinkler Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

BCA0492**Fire Sprinkler Co-op Summer 3****30.40 credits**

This is a Year Three, Summer Three, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Fire Sprinkler Apprenticeship program. Field activities are coordinated with classroom activities to provide students

the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

BCA0493**Fire Sprinkler Co-op Summer 4****30.40 credits**

This is a Year Four, Summer Four, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Fire Sprinkler Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

Apprenticeship - HVAC

ACR0911**HVAC Co-op Summer 1****30.40 credits**

This is a Year One, Summer One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

ACR0912**HVAC Co-op Summer 2****30.40 credits**

This is a Year Two, Summer Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

ACR0913**HVAC Co-op Summer 3****30.40 credits**

This is a Year Three, Summer Three, coordinated work-study program that reinforces

the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

ACR0914**HVAC Co-op Summer 4****30.40 credits**

This is a Year Four, Summer Four, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

ACR0930**HVAC Co-op 1****18.13 credits**

This is a Year One, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

ACR0931**HVAC Co-op 2****18.13 credits**

This is a Year One, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

ACR0932
HVAC Co-op 3**18.13 credits**

This is a Year Two, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

ACR0933
HVAC Co-op 4**18.13 credits**

This is a Year Two, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

ACR0934
HVAC Co-op 5**18.13 credits**

This is a Year Three, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

ACR0935
HVAC Co-op 6**18.13 credits**

This is a Year Three, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air

Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

ACR0936
HVAC Co-op 7**18.13 credits**

This is a Year Four, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

ACR0937
HVAC Co-op 8**18.13 credits**

This is a Year Four, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Heating, Ventilation, and Air Conditioning Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

ACR0940
HVAC 1**2.67 credits**

This course provides an introduction to the Heating, Ventilation, and Air Conditioning Trade and presents information on mathematics and tools of the trade for first year apprentices. (80 contact hrs.)

ACR0941
HVAC 2**2.67 credits**

This course continues the topics presented in HVAC 1, and introduces students to heating and cooling systems. (80 contact hrs.)

ACR0942
HVAC 3**2.67 credits**

This course provides instruction for second year apprentices in gas laws and the properties of air, as well as the use and installation of various types of duct systems. The principles of combustion, mechanical maintenance, and basic electronics are also presented. (80 contact hrs.)

ACR0943
HVAC 4**2.67 credits**

The focus of this course is in understanding the function and operation of control systems, metering devices, compressors, and heat pumps. Students will be able to complete the installation and servicing of this equipment. (80 contact hrs.)

ACR0944
HVAC 5**2.67 credits**

This course provides skills in maintenance and troubleshooting of various types of HVAC systems and equipment for the third year apprentice. (80 contact hrs.)

ACR0945
HVAC 6**2.67 credits**

This course is a continuation of HVAC 5, with the addition of information on air distribution and steam systems, as well as establishing and maintaining good customer relations. (80 contact hrs.)

ACR0946
HVAC 7**2.67 credits**

This course provides advanced blueprint reading, and presents the fourth year apprentice with information on energy conservation and management equipment and systems. (80 contact hrs.)

ACR0947
HVAC 8**2.67 credits**

Students learn about water quality and treatment, and how to design heating and cooling systems. This course also covers

commercial and industrial refrigeration. (80 contact hrs.)

Apprenticeship - Plumbing

BCA0444 **Plumbing Summer Co-op 1** **16.70 credits**

This is a Year One, Summer One coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Plumbing Apprenticeship Program. Field Activities. This summer cooperative experience is the continuation and completion of Plumbing Co-op 1 and 2. (500 contact hrs.)

BCA0445 **Plumbing Summer Co-op 2** **16.70 credits**

This is a Year Two, Summer Two coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Plumbing Apprenticeship Program. Field activities. This summer cooperative experience is the continuation and completion of Plumbing Co-op 3 and 4. (500 contact hrs.)

BCA0446 **Plumbing Summer Co-op 3** **16.70 credits**

This is a Year Three, Summer Three coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Plumbing Apprenticeship Program. Field activities. This summer cooperative experience is the continuation and completion of Plumbing Co-op 5 and 6. (500 contact hrs.)

BCA0447 **Plumbing Summer Co-op 4** **16.70 credits**

This is a Year Four, Summer Four coordinated work-study program that reinforces

the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Plumbing Apprenticeship Program. Field activities. This summer cooperative experience is the continuation and completion of Plumbing Co-op 5 and 6. (500 contact hrs.)

BCA0450 **Plumbing 1** **2.70 credits**

This course covers the essentials of code law and careers related to plumbing, tools, pipes and fittings used in plumbing installation; safety and hazardous materials training; and review of basic mathematics and sciences applied to the plumber's craft. (80 contact hours.)

BCA0451 **Plumbing 2** **2.70 credits**

This course provides an overview of installation practices of plumbing fixtures, faucets and valves, first aid, occupational safety and health, and blueprint reading and sketching. (80 contact hrs.)

BCA0452 **Plumbing 3** **2.70 credits**

Instruction includes plumbing installation techniques, including water pipes, distribution systems, water heaters, sewage and drainage fixtures and continued development of applied mathematics skills. (82 contact hrs.)

BCA0453 **Plumbing 4** **2.80 credits**

This course teaches welding techniques and safety, including soldering, brazing and cutting, metal-arc and oxy-acetylene welding and pipe tacking. Other topics include plumbing installation techniques involving sewage pumps and ejectors, venting, and hangers; scientific concepts of water and water pressure related to plumbing; rigging and hoisting techniques and safety are reviewed. (83 contact hrs.)

BCA0454 **Plumbing 5** **2.50 credits**

This course introduces residential and commercial installation of plumbing fixtures and appliances, develops more mathematical concepts used by plumbers, and covers gas codes for installation, inspection and testing. (76 contact hrs.)

BCA0455 **Plumbing 6** **2.50 credits**

This course covers more topics in applied mathematics used by plumbers including calculations of tank capacities, volume and weight of water, sizing storm drains and piping expansion. Advanced applied scientific topics include heat transfer, basic electricity, electric current, electrical safety and electrical troubleshooting and advanced structural blueprint reading, including floor plans, site plans, plumbing, electrical, HVAC, and detail plans. (76 contact hrs.)

BCA0456 **Plumbing 7** **2.50 credits**

This course introduces repairs and servicing of residential, commercial, institutional and industrial fixtures and piping systems. Mathematical concepts are advanced using formulas and tables to calculate pipe and system sizing. Heating systems are covered, including hot water boilers, steam boilers, hydronic, warm air, solar and humidification systems. (76 contact hrs.)

BCA0457 **Plumbing 8** **2.60 credits**

This course continues the science applications related to pumps and pump repair and maintenance. Advanced blueprint reading, sketching and materials take-off and estimates are covered. Plumbing codes are emphasized including regulations regarding sanitary drainage systems, medical facility plumbing, private sewage disposal, portable water supply pumps for mobile homes and trailer parks. (77 contact hrs.)

BCA0460
Plumbing Co-op 1
25.00 credits

This is a Year One, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (750 contact hrs.)

BCA0461
Plumbing Co-op 2
25.00 credits

This is a Year One, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (750 contact hrs.)

BCA0462
Plumbing Co-op 3
25.00 credits

This is a Year Two, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (750 contact hrs.)

BCA0463
Plumbing Co-op 4
25.00 credits

This is a Year Two, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the

opportunity to apply their knowledge and gain hands-on skills. (750 contact hrs.)

BCA0464
Plumbing Co-op 5
25.00 credits

This is a Year Three, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (750 contact hrs.)

BCA0465
Plumbing Co-op 6
25.00 credits

This is a Year Three, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (750 contact hrs.)

BCA0466
Plumbing Co-op 7
25.00 credits

This is a Year Four, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (750 contact hrs.)

BCA0467
Plumbing Co-Op 8
25.00 credits

This is a Year Four, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom studies and field experience for the Plumbing Apprenticeship Program.

Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills (750 contact hrs.)

Apprenticeship - Sheet Metal

PTA0300
Sheet Metal Co-op 1
18.13 credits

This a Year One, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0301
Sheet Metal Co-op 2
18.13 credits

This a Year One, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0302
Sheet Metal Co-op 3
18.13 credits

This a Year Two, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0303
Sheet Metal Co-op 4
18.13 credits

This a Year Two, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0304
Sheet Metal Co-op 5
18.13 credits

This a Year Three, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0305
Sheet Metal Co-op 6
18.13 credits

This a Year Three, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0306
Sheet Metal Co-op 7
18.13 credits

This a Year Four, Semester One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students

the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0307
Sheet Metal Co-op 8
18.13 credits

This a Year Four, Semester Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (544 contact hrs.)

PTA0390
Sheet Metal 1
2.70 credits

This course provides first year apprentices with an introduction to the sheet metal trade, as well as mathematics of the trade, tools of the trade, and steel and other metals, including fasteners, hangers, and supports. (81 contact hrs.)

PTA0391
Sheet Metal 2
2.70 credits

This course provides instruction in principles of layout, sheet metal processes, and parallel line development. (81 contact hrs.)

PTA0392
Sheet Metal 3
2.70 credits

This course provides second year apprentices with a continuation of mathematics for the trade, and an introduction to piping practices, radial line development, bend allowances, and soldering. Students will also learn to interpret and use blueprints and specifications. (81 contact hrs.)

PTA0393
Sheet Metal 4
2.70 credits

Students will learn about standards and codes for the industry, including sheet metal duct fabrication standards. Information on insulation, gutters and downspouts, and roof flashing is also presented. (81 contact hrs.)

PTA0394
Sheet Metal 5
2.70 credits

Third year apprentices will learn about principles of airflow and of refrigeration, as well as about the equipment used in heating, ventilation, and air conditioning. (81 contact hrs.)

PTA0395
Sheet Metal 6
2.70 credits

This course provides knowledge of the fabrication and layout of fiberglass duct, the principles of triangulation, and skills associated with field measurement. Students will also acquire knowledge and skills in welding, brazing, and cutting, including safety requirements and practices. (81 contact hrs.)

PTA0396
Sheet Metal 7
2.70 credits

Fourth year apprentices learn about shop production and organization, including efficient operations and utilization of manpower. They also learn about the principles of air balance and air distribution systems. (81 contact hrs.)

PTA0397
Sheet Metal 8
2.70 credits

This course provides students with knowledge of louvers, dampers, access doors, hoods, and ventilators. Students will also learn about fume and exhaust systems design. (81 contact hrs.)

PTA0941
Sheet Metal Co-op Summer 1
30.40 credits

This a Year One, Summer One, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

PTA0942
Sheet Metal Co-op Summer 2
30.40 credits

This a Year One, Summer Two, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

PTA0943
Sheet Metal Co-op Summer 3
30.40 credits

This a Year Three, Summer Three, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

PTA0944
Sheet Metal Co-op Summer 4
30.40 credits

This a Year Four, Summer Four, coordinated work-study program that reinforces the educational and professional growth of students through parallel involvement in classroom instruction and field experience for the Sheet Metal Apprenticeship program. Field activities are coordinated with classroom activities to provide students the opportunity to apply their knowledge and gain hands-on skills. (912 contact hrs.)

Automotive Mechanics

AER 0605
Tesla Electronic System Technician
13.25 Credits

This course prepares the student to apply technical knowledge and skills to repair, service, and maintain Tesla vehicles. At the end of the course, the student will be able to diagnose mal-

functions in and repair electrical, charging, penthouse, driver assist and infotainment systems and components. Co-Req: AER 0606. (400 Contact Hours)

AER 0606
Tesla Maintenance Technician
13.25 Credits

This course prepares the student to apply technical knowledge and skills to repair, service, and maintain Tesla vehicles. The student will learn Tesla's products and diagnostic tools, as well as safety equipment and procedures. At the end of the course, the student will be able to diagnose malfunctions in and repair HVAC, brake, and chassis systems and components. Co-Req: AER 0605. (400 Contact Hours)

Aviation Maintenance Technology

AMT 0044
Tools, Materials, and Processes 1
1.33 credits

This course provides an introduction to the tools, hardware and material used in aircraft maintenance, repair, and safety. The student will be able to understand the information found in aircraft drawings, blueprints, charts and graphs Including stress materials' internal resistance and counterforce that opposes deformation. (40 Clock Hours)

AMT 0045
Tools, Materials, and Processes 2
1.33 credits

In this course, the student will learn the principles of corrosion and how to control it are studied and applied. This course provides experience in detecting, identifying, removal, and treatment of the various types of corrosion found on ferrous and non-ferrous metals. In addition, the student will learn about various forms of truss-types and how beams, struts, and bars resist deformation by applied loads. (40 clock hours)

AMT 00046
Aircraft Materials, Hardware & Processes
2.26 credits

In this course, the student will learn about chemical processes, hazards of aviation solvents, lubricants, effects of corrosion on metals and aluminum, and measuring and sheet metal layout. Prerequisites: AMT 0044 and AMT 0045. (68 Clock Hours)

AMT 0047
Applying the Design Process
1.76 credits

In this course, the student will learn to create aircraft drawings, blueprints, charts and graphs; test equipment, including non-destructive inspection and testing; and determine best practices with respect to sealants and epoxies. Prerequisites: AMT 0044 and AMT 0045. (53 Clock Hours)

AMT 0219
Aircraft Hydraulics & Aviation Mathematics
0.63 credits

In this course, the student will learn about aircraft hydraulic and pneumatic systems and advanced aviation mathematics. Prerequisites: AMT 0044 and AMT 0045. (19 Clock Hours)

AMT 0269
Aircraft Electrical Systems & Quality Control
2.13 credits

In this course, the student will learn the principles of basic electricity as it relates to aviation electrical systems; work with data, including computer-generated flow diagrams and spreadsheets; working with wiring & fiber optics; advanced blueprint reading with respect to performing actual tasks; and key elements of quality control. Prerequisites: AMT 0044 and AMT 0045. (64 Clock Hours)

AMT 0509
Composites and Capstone Project
0.40 credits

In this course, the student will learn about composite materials. In addition, the student will demonstrate their competence to analyze, design, develop, and test Aircraft

CAREER TECHNICAL COURSES

Structural Assembly and Fabrication techniques. Prerequisites: AMT 0044, 0045, 0046, 0047, 0219, 0269. (12 Clock Hours)

AMT 0949 **On the Job Training (OJT)** **13.33 credits**

In this training course, the student will learn to perform the required tasks at the work place. This course adds a diversified experience and abilities while enriching the self-acquired proficiency of the student. Training is designed to minimize the margin of errors at the workplace. (4,000 clock hours)

Banking

BAN0930 **Banking for Tellers** **1.50 credits**

This course provides the necessary background information and hands-on training for an individual who wishes to obtain employment in today's banking industry. It includes orientation to different types of financial institutions and the regulations that affect them. Special fee. (45 contact hrs)

BRC0109 **Teller Training** **3.50 credits**

This course emphasizes the hands-on skills that a bank teller needs to master to perform effectively. Topics include cash handling and balancing at the end of the work shift, processing transactions and deposits, and compliance with banking laws and regulations. Customer service techniques and attitudes are also included. Special fee. (105 contact hrs.)

Business

MKA0250 **Economic Principles of Import/Export** **1.00 credits**

This course will help the student understand the economic forces which affect import and export activity. The course

will demonstrate the effect of the economic decisions of both U.S. and foreign governments on international commerce. Emphasis will be placed on real-world solutions. Special fee. (30 contact hrs.)

MKA0251 **Import/Export Financing** **2.00 credits**

This course will show the student how public and private financing programs operate. A variety of financing vehicles, including letters of credit, will be discussed in a hands-on environment. Special fee. (60 contact hrs.)

MKA0300 **Customer Service/Business** **2.50 credits**

This course follows a curriculum originally developed in cooperation with American Express. Topics include understanding of the customer, effective techniques in dealing with difficult customers, and supervision of customer service. Special fee. (75 contact hrs.)

SBM0002 **Small Business Management;** **Introduction** **2.50 credits**

This course focuses on the problems that must be faced and overcome for the small business entrepreneur to be successful. Among topics covered are financial banking, employee relations, marketing plan, and legal considerations. Special fee. (75 contact hrs.)

Business Law

BUL0243 **Business Law 1** **2.50 credits**

The objectives of business law recognize the fact that classes are comprised of business and accounting students with varying abilities, previous experience and different backgrounds, and that they are seeking the basic legal concepts and skills necessary for personal, social and business effectiveness. Special fee. (75 contact hrs.)

Computer Science & Related Technologies

CGS0281 **Wireless Networking I** **2.50 credits**

This course provides the student with a complete foundation of knowledge for entering into or advancing in the wireless networking industry. Topics include: an introduction to wireless LANs; RF antennas and accessories; wireless LAN standards; and wireless LAN organizations to link budget math, troubleshooting, performing a site survey. This course delivers hands-on training that benefits the novice as well as the experienced network professional. Prerequisites: CGV 0010 & CGS 0890. Laboratory fee. (75 contact hrs.)

CGS0282 **Wireless Networking II** **2.50 credits**

This course provides the student with a complete foundation of knowledge for entering into or advancing in the wireless networking industry. Topics include: 802.11 architecture, MAC and physical layer discussions, troubleshooting wireless LAN installations, wireless LAN security and site survey fundamentals. This course is a second level course that delivers hands-on training that benefits the novice as well as the experienced network professional. Prerequisites: CGS 0286. Laboratory fee. (75 contact hrs.)

CGS0306 **Information Systems Development** **2.50 credits**

Students will learn the design of management information systems (MIS) by using concepts of charting, investigating, documenting, and reporting. This is developed by using computerized case study software. Special fee. (75 contact hrs.)

CGS0566 **Microcomputer Operating Systems (DOS)** **2.50 credits**

A comprehensive course in the use of operating systems for DOS Microcomputers.

DOS concept, features, commands and their applications are presented. Commercial utility programs, hard disk utilization, Edlin and DOS batch programming will be covered in detail. Special fee. (75 contact hrs)

CTS0035
Introduction to the "C" Program
2.50 credits

An introductory course covering the syntax and rules of the "C" language. Students will learn the topics of program design, variables, output, flow control, and functions. Students are required to code and execute business applications. Special fee. (75 contact hrs.)

CTS0036
Advanced "C" Programming
2.50 credits

An advanced study in the techniques of programming using the "C" language. Structured modular programming and data structure are emphasized throughout the course. Students are required to code and execute business applications. Prerequisite: CTS 0035. Special fee. (75 contact hrs.)

CTS0050
Introduction to Microcomputers
2.50 credits

This course introduces the student to modern microcomputer hardware and software. The topics covered include operation of microcomputer hardware and peripherals, operating system commands, word processing software and database management software. The 75 contact hours encompass both lecture and laboratory components. Special fee. (75 contact hrs.)

CTS0053
Word Processing
1.50 credits

This is an introductory course using commercial microcomputer word processing software. The concepts, features, and commands of a word processing system are supplied to a variety of practical business applications. Classes are conducted in a hands-on lecture/laboratory environment. Each student is assigned a microcomputer to use during class. No previous computer

training or experience is required. Special fee. (45 contact hrs.)

CTS0055
Electronic Spreadsheets with Applications
2.50 credits

A comprehensive course in the use of a spreadsheet for microcomputers. The concepts, features, and commands of a spreadsheet are applied to a variety of applications. Programming concepts will be introduced. Classes are conducted in hands-on lecture/laboratory environment. The content of this course will continually change to keep pace with current technology. Prerequisite: CGV 0010 or equivalent. Special fee. (75 contact hrs.)

CTS0065
Database and Applications & Programming
2.50 credits

This course is designed as an entry level programming language course for those who have a basic knowledge of microcomputer software. The student will create a database and then write user friendly programs to add, delete, and modify and create various reports. The 75 contact hours are comprised of both lecture and laboratory sessions and equivalent knowledge. Prerequisites: CGV 0010 or equivalent. Special fee. (75 contact hrs.)

CTS0080
Supporting Windows Server
2.50 credits

This course includes a study of selection criteria for network hardware, management strategies, network performance optimization, advanced printing concepts, remote console management, multiple protocol support, and prevention and maintenance techniques. Special fee. (75 contact hrs.)

CTS0081
Supporting Windows Professional
2.50 credits

A study of the terminology, components, design, installation and management of local area networks and a consideration of other data communication equipment. Featured topics: elements of LAN sys-

tem, LAN standards, design considerations, installation, LAN administration, and user operation. Special fee. (75 contact hrs.)

CTS0091
Implementing a Network Infrastructure
2.50 credits

The student will be provided the opportunity to develop the skills necessary to install, configure, manage, and support a network infrastructure. Additionally, the student will configure the DHCP Server service, configure the DNS Server service, configure WINS, configure network security protocols, configure network security by using Public Key Infrastructure (PKI), configure network security by using Internet Protocol Security (IPP Sec), configure remote access to a network, support remote access to a network. Prerequisite: CTS 0080. Special fee. (75 contact hrs.)

CTS0092
Designing a Network Infrastructure
2.50 credits

This course will provide the knowledge and skills necessary to develop a Windows networking services solution for enterprise networks. The course focuses on developing strategies for TCP/IP, DHCP, DNS, WINS, RAS, Remote Authentication Dial-in User Service (RADIUS), connection manager, routing, multicasting, demand-dial routing, VPN, IP Sec, connection sharing, and proxy server. This course also introduces the process of translating business goals into strategies for implementing and managing the Windows networking services. Prerequisite: CTS 0093. Special fee. (75 contact hrs.)

CTS0093
Implementing Directory Services
2.50 credits

The student will be provided the opportunity to gain the knowledge and skills necessary to install, configure, and administer Windows directory services. The course also focuses on implementing group policy and performing the group policy-related tasks required to centrally manage users and computers. Prerequisite: CTS 0080. Special fee. (75 contact hrs.)

CTS0095
Information Security
2.50 credits

This course provides the student with a complete foundation of knowledge for entering into or advancing in the information technology security field. Topics include: an introduction to general security concepts; communication security; infrastructure security; basic cryptography; operational and organizational security. Including topics from troubleshooting to performing a site survey, this course delivers hands-on training that benefits the novice as well as the experienced network professional. Prerequisite: CTS 0091. Laboratory fee. (75 contact hrs.)

CTS0098
Infrastructure Security
2.50 credits

This course will explore concepts of network defense and countermeasures as well as hardware and software required to design, configure, and implement secure networks. Security topics covered include in-depth TCP/IP packet and signature analysis, securing routers, securing network resources through Access Control List (ACL), and implementation of IPSEC using Linux and Windows Operating Systems (OS). The student will obtain hands-on instruction installing and using various security tools. Techniques for collecting, monitoring and auditing various activities will be afforded to the student. Students will analyze threats and intrusions for various business scenarios, and then determine which security policy provides the most protection at given acceptable levels of risk in order to conduct normal business activities. The course will provide a detailed presentation on the Internet and WWW structure, and the security issues associated with begin online. A combination of lectures, demo

EEV0554
Networking Essentials
2.50 credits

This course is designed to provide students who are preparing to become network support technician's fundamental preparation in network concepts. Students will learn the skills necessary to identify the

type, components, and design of a Local Area Network most appropriate for a given site. Prerequisite: CTS0050. Special Fee. (75 contact hrs.)

Criminal Justice_& Related Technologies

CJK0001
Introduction to Law Enforcement
0.33 Credits

This is an introduction to law enforcement in Florida and the values and ethics required for criminal justice officers. The student will learn to understand the consequences of sexual harassment, describe the Criminal Justice System and the structure of criminal justice agencies in Florida. For School of Justice students only. (10 contact hrs.)

CJK0012
Legal
2.06 Credits

This is an introduction to legal rules and concepts, amendments and law. The student will learn the basics of law, civil and criminal liability and legal considerations when dealing with juveniles. For School of Justice students only. (62 contact hrs.)

CJK0013
Interactions in a Diverse Community
1.33 Credits

The student will learn the common communication traits of individuals based upon their cultures, experiences, physical and psychological conditions, and how specific situations can challenge an officer's effort to perform his or her duties. The student will learn different communication styles and to adapt to meet the needs of the people they are interacting with, eliminating potential miscommunications that may jeopardize an officer's effectiveness or safety. For School of Justice students only. (40 contact hrs.)

CJK0014
Interviewing and Report Writing
1.86 Credits

The student will learn note taking, interviewing, and report writing principles and

mechanics. The student will also learn to take statements from victims, witnesses, and suspects; write clear concise and accurate incident and arrest reports. For School of Justice students only. (56 contact hrs.)

CJK0020
CMS Law Enforcement Vehicle Operations
1.60 credits

Students will learn the physiological and psychological factors affecting vehicle operations. This course stresses the importance of vehicle maintenance, environmental conditions affecting driving, and elements of basic driving skills including skids and other causes of accidents. Students will demonstrate hands-on basic driving skills. For School of Justice students only. (48 contact hrs.)

CJK0031
CMS First Aid For Criminal Justice Officers
1.33 credits

Students will learn to initiate treatment for a variety of medical emergencies, understand and perform CPR, and know when to activate EMS and perform basic life support until help arrives. CPR and First Responder certification cards are issued upon successful completion. This course prepares criminal justice recruits for a variety of medical emergencies with minimal medical supplies. Basic training for School of Justice students only. (40 contact hrs.)

CJK0040
CMS Criminal Justice Firearms
2.66 credits

Students will learn how to use both handguns and shotguns. Students must qualify with both weapons under both daylight and night conditions. Students must also demonstrate ability for both accuracy and decision making. Students are also introduced to chemical weapons and their effects. (80 contact hrs.)

CJK0051
CMS Criminal Justice Defensive Tactics
2.66 credits

Students will learn how to physically defend themselves, physically control per-

sons under arrest, and know what level of force is appropriate under differing circumstances. Additionally, a physical conditioning program is part of this course. For School of Justice students only. (80 contact hrs.)

CJK0064 **Fundamentals of Patrol** **1.16 Credits**

The student will focus on the use of communications equipment, Community-Oriented Policing, officer safety and survival skills, and basic instruction on responding to calls and making an arrest, as well as helpful resources. Law enforcement officers will spend the majority of their time patrolling an assigned area, and this chapter provides an overview of the law enforcement techniques and tactics that officers use while on patrol. For School of Justice. (35 contact hrs.)

CJK0065 **Calls for Service** **1.20 Credits**

The student will learn to respond to a variety of calls for service, which will vary between noncriminal and criminal incidents. This chapter provides an overview of the more common calls for service that an officer may encounter. For School of Justice students only. (36 contact hrs.)

CJK0077 **Criminal Investigations** **1.66 Credits**

The student will learn how to respond to an initial call for service, always preserve life first and then work to preserve the scene for investigation. This chapter will identify the key elements of crimes most frequently encountered during a shift to help you avoid some common mistakes made in the field. For School of Justice students only. (80 contact hrs.)

CJK0078 **Crime Scene to Courtroom** **1.16 Credits**

The student will learn to take a sequence of steps to protect all parties: gather information; identify, separate, and interview subjects; and complete the initial investi-

gation successfully. For School of Justice students only. (35 contact hrs.)

CJK0087 **Traffic Stops** **1.00 Credits**

The student will learn that the primary responsibility in making traffic stops is to encourage voluntary compliance with traffic laws and improve driver judgment and future behavior. This courses end results should be driver education and safer roads. For School of Justice students only. (30 contact hrs.)

CJK0084 **DUI Traffic Stops** **0.80 Credits**

The student will be trained to detect impaired driving, administer field sobriety tests, make arrests when appropriate, and record the evidence of a DUI offense. For School of Justice students only. (24 contact hrs.)

CJK0088 **Traffic Crash Investigations** **1.06 Credits**

The student will learn to conduct traffic crash investigations by following a step-by-step approach that encompasses the initial response to the scene, scene assessment and protection, the identification and analysis of information gathered from witnesses, the thorough investigation of the crash, the evaluation of physical evidence collected, returning the crash scene to normal, taking appropriate enforcement action, and documenting the crash. For School of Justice. (32 contact hrs.)

CJK 0092 **Critical Incidents** **1.46 Credits**

The student will learn to be prepared to address many situations in the course of patrolling their assigned areas. This course provides an overview of law enforcement techniques and tactics employed in confronting large scale or critical incidents such as active shooters, natural disasters, hazardous materials exposure, explosive devices, and weapons of mass destruction.

For School of Justice students only. (44 contact hrs.)

CJK0096 **Criminal Justice Officer Physical Fitness Training** **2.00 credits**

The student will learn the benefits of maintaining physical fitness to include nutrition ad diet. The student will also learn the effects of and how to deal with stress, how to build up muscular and cardiovascular endurance and perform the exercises as required. For School of Justice students only. (60 contact hrs.)

CJK0300 **Introduction to Corrections** **1.06 credits**

The student will learn the responsibilities of a correctional officer to provide safety for him/herself, public, staff, and inmates. The student will learn an overview on safety and security concerns, identification, manipulation and deception, contraband, and searches in a correctional setting. This course is for School of Justice students only. (32 Contact Hours)

CJK0305 **CJSTC Communications** **1.33 credits**

Students will learn practical communication skills that will assist new correctional officer in managing and supervising inmates, giving directions, answering questions, and interacting with others in a professional and safe manner. For School of Justice students only. (40 contact hours)

CJK0310 **Officer Safety** **0.53 credits**

The student will learn the responsibilities of a correctional officer to provide safety for him/herself, public, staff, and inmates. The student will earn an overview on safety and security concerns, identification, manipulation and deception, contraband, and searches in a correctional setting. This course is for School of Justice students only. (16 contact hours)

CJK0315
Facility and Equipment
0.26 credits

Correctional officers are responsible for equipment and materials used to keep correctional facilities clean, safe, and secure. The student will learn basic knowledge of standard equipment used to support the safe and efficient operation of equipment, and to provide a safe environment for inmates, staff, and visitors. This course is for School of Justice students only. (8 contact hours)

CJK0320
Intake and Release
0.60 credits

Students will gain the knowledge of facility policies and procedures, state laws, and legal guidelines. The student will learn intake, classification, and release processes that include verification of identity, required documentation, person and property searches, property inventory, fingerprinting, photographing, assessing custody levels, assigning housing, and releasing of inmates. For School of Justice students only. (18 contact hours)

CJK0325
Supervising in a Correctional Facility
1.33 credits

The student will develop supervisory and observational skills. The student will learn to ensure the safe operation of a correctional facility while fulfilling his or her responsibilities. For School of Justice students only. (40 contact hours)

CJK0330
Supervising Special Populations
0.66 credits

Students, as correctional officers, will learn to interact with a variety of individuals who have been grouped together such as gang members, substance abusers, mentally ill, elderly and disabled inmates. Students will learn to be aware of special populations and respond appropriately when interacting with and supervising them. For School of Justice students only. (20 contact hours)

CJK0335
Responding to Incidents and Emergencies
0.53 credits

Correctional officers are expected to apply knowledge, training, and reasonable judgment to ensure the safety and security of all persons at the facility during an emergency. The student will learn to be effective in the use of equipment, crime scene control, chain of custody procedures, and documentation in any incident/emergency. For School of Justice students only. (16 contact hours)

CJK0340
Officer Wellness and Physical Abilities
1.00 credits

Students will learn the benefits of maintaining physical fitness to include nutrition and diet. Students will learn of the effects of stress and how to deal with it; how to build up muscular and cardiovascular endurance and perform the exercises as required. For School of Justice students only. Special fee. (30 contact hours)

CJK0422
Dart-Firing Stun Gun
0.26 credits

Students will learn how a dart-firing stun gun works, what effects a dart-firing stun gun has on the human body, and the necessary medical considerations for individuals exposed to a dart-firing stun gun. This course satisfies the statutory requirements of F.S. 943.1717(2) for an officer to use a dart-firing stun gun in Florida. Special fee. (8 contact hrs.)

SCY0051
Private Investigator Intern Course A
0.80 credits

This course requires twenty four hours of training as required by Section 493.6203(b) F.S. for Private Investigator Interns. Students will learn topics which include Florida Statutes and Florida Administrative Code, the Intern/Sponsor Relationship, Ethics, Liability, Surveillance, Report Writing, Equipment, Interviewing, Sources of Information, the Computer and

Investigations, and Restrictions on Records. (24 contact hrs.)

SCY0052
Private Investigator Intern Course B
0.53 credits

This course requires sixteen hours of training as required by Section 493.6203(b) F.S. for Private Investigator Interns. Students will learn topics which include locating people and performing background investigations, evidence, executive protection, anti-terrorism, courtroom and formal hearing demeanor, pretrial responsibilities, and the investigator as a witness. Prerequisite: SCY 0051 (16 contact hrs.)

Emergency Medical Services

EMS0110
Emergency Medical Technician
10 credits

The Emergency Medical Technician (EMT) course prepares students to provide pre-hospital assessment and care for patients of all ages with a variety of medical conditions and traumatic injuries. Areas of study include an introduction to emergency medical services systems, roles and responsibilities of EMTs, anatomy and physiology, medical emergencies, trauma, special considerations for working in the pre-hospital setting, and providing patient transportation.

Engineering Technology-General

EEV0561
Microcomputer Maintenance & Repair 1
2.50 credits

This course is designed to provide a technician with the theoretical and practical requirements for maintenance and repair of microcomputer equipment. Topics include data communication codes and standards, transmission impairment, modems with lab applications. Special fee. (75 contact hrs.)

EEV0562
Microcomputer Maintenance & Repair 2

2.50 credits

This course teaches troubleshooting skills to repair microcomputers and printers, with emphasis on a hard disk maintenance and repair. Special fee. (75 contact hours)

EEV0811
D.C. Analysis
3.20 credits

This course will introduce the field of electronics, clarify the basic laws of electricity, and provide hands-on training with various types of D.C. circuits and power supplies. Special fee. (95 contact hrs.)

EEV0813
Solid State Components and Circuits
4.20 credits

This course will introduce the solid state devices that are found in electronic equipment and provide hands-on training with circuits that contain these devices. Special fee. (126 contact hrs.)

EEV0821
Electronic Fundamentals
2.50 credits

The course will introduce paper lab and safety procedures, provide hands-on soldering training, and introduce proper recording and reporting procedures. Special fee. (75 contact hours)

Film, Radio, TV Technology

RTT0002
Broadcast News
1.50 credits

This course will familiarize students with the procedures followed in producing and writing broadcast news. The student will become familiar with news writing formats and stylebook applications. The students will write several news stories and a newscast. Special fee. (45 contact hrs.)

RTT0170
Television Graphics Procedures
3.00 credits

This course requires the students to participate in the practical use of and production of visual graphics material for television, covering the standards and procedures established in the field, and the most common techniques and materials. Special fee. (90 contact hrs.)

RTT0176
TV Production Procedures 2
5.00 credits

Students will refine skills as a member of a TV Studio Production Crew. Students will perform crew operations during various studio productions. Special fee. (150 contact hrs.)

RTT0177
Field Production Procedures 1
5.00 credits

Students will participate in several single camera field productions. Students will shoot; edit and post produce single camera field productions. Special fee. (150 contact hrs.)

RTT0178
Field Production Procedures 2
5.00 credits

Students will learn and participate in advanced single-camera production. Students will edit single-camera production using Beta cam SP A/B Roll Equipment. Students will learn and participate in a multi-camera format production outside the studio environment. Each student will perform various job functions, resulting in a class project. Special fee. (150 contact hrs.)

RTT0181
TV Production Procedures 1
5.00 credits

This course is to familiarize the student with the different equipment that prepares them to function as a member of a technical team for a video production in a Television Studio. Special fee. (150 contact hours)

RTT0182
Television Directing Procedures
5.00 credits

Students will learn the disciplines, techniques and procedures used by the Television Director during the studio production process. The student will assume the responsibilities of the Television Director and coordinate the various production elements from the Control Room. Students will learn key terms used by the Director and master the Control Room equipment. Prerequisite: RTT 0176. Special fee. (150 contact hours)

RTT0184
TV Editing Procedures
5.00 credits

This course is designed to familiarize the student with an editing suite and to give the student the opportunity to perform the functions of an editor. In order to do this, we will use Beta Cam editing equipment and the Sony BVE 910 edit control. Students will also operate Character Generators, switchers and DVE generators to enhance assignments. Non-Linear editing has been added to this course. Students will work with and get an appreciation on the AVID non-linear editing system. Prerequisite: RTT 0177. Special fee. (150 contact hours)

RTT0189
TV Film Computer Applications Procedures
3.00 credits

Applications of software and computer languages in the television industry. Includes introduction to integrated software for scriptwriting, storyboarding, production scheduling, cost controls, project inventory and computer generated graphics. Special fee. (90 contact hours)

RTT0193
Advanced Editing Procedures
5.00 credits

This course is designed to familiarize students with non-linear editing. The course also gives the student the opportunity to perform the activities of a non-linear editor. In order to accomplish this, the course will use three non-linear editing systems;

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the AVID and Media 100 non-linear computer editing system for video and audio editing and Degi Design with Pro Tools for audio only non-linear editing. Prerequisite: RTT 0184. Special fee. (150 contact hours)

RTT0201 **Radio Productions** **3.00 credits**

The purpose of this course is to prepare students for initial employment as a radio programming announcer broadcast technician, or to provide supplemental training for persons previously or currently employed in these occupations. Special fee. (90 contact hours)

RTT0210 **Radio Programming Operations** **2.50 credits**

This course provides instruction and practice in the preparation and delivery of various types of radio programming. Knowledge station organization and procedure is combined with announcing in a manner required of announcer-operators in smaller radio stations. Special fee. (75 contact hours)

RTT0222 **Announcing on Radio** **2.50 credits**

This course emphasized the fundamentals of good speech, effective oral delivery, interview materials that are included in the third class license exam, and introduces employability skills needed in the industry. Special fee. (75 contact hours)

RTT0400 **TV Master Control Operations** **3.00 credits**

This course is designed to familiarize the student with master control operations typical of a commercial broadcast station, cable company or independent provider. The course includes station operation, programming, reading of logs, SMPTE time code reading, switching operations, audio design and operation, satellite and microwave operation. Also includes: back-timing calculations, emergency procedures, documentation of engineering errors, and other techniques typical of a master control room

operator. Reinforcement of operational functions learned in Television Production 1 including, video tape, audio mixer, switcher, character generator, and routing switcher operations. Special fee. (90 contact hours)

RTT0940 **Television Studio Internship 1** **5.00 credits**

This is a 150-hour activity that provides hands-on experience in a commercial or in-house television house production studio. A contractual agreement listing the learning objectives of the course must be drawn up and signed by the student, faculty member, and site supervisor. Special fee. (150 contact hours)

RTT0944 **Radio Internship 1** **5.00 credits**

This course provides practice in the skills needed for employment in a smaller type radio station. The course is established by determination of six learning objectives which are approved and evaluated in writing by student, supervisor and faculty coordinator. Special fee. (150 contact hours)

RTT0945 **Radio Internship 2** **5.00 credits**

This course provides more advanced practice in the skills needed for employment in a smaller type radio station. The course is established by determination of learning objectives which are approved and evaluated in writing by student, supervisor and faculty coordinator. Special fee. (150 contact hours)

Fire Science

FFP0021 **Fire Fighter Minimum Standards** **15.00 credits**

This course teaches the initial and intermediate knowledge and skills for prospective firefighters. Via lectures, drills, and evolutions, students will learn to operate as a team under supervision. Successful completion of all examinations, performance objectives and adherence to the Student Manual are required. Fire Academy Students Only. (450 contact hours)

FFP0077 **First Responder** **1.50 credits**

A training course for students who will provide basic life support to victims of emergencies, to minimize patient discomfort and prevent further injury. This course is a required part of fire fighter training. Special fee. (45 contact hours)

Food Service

HMV0991 **Selected Studies** **1.00 credits**

Designed to offer an in-depth treatment of special areas under the various occupational categories; it may be varied each term according to faculty and student planning. This offering is numbered 0991, with prefix of the subject area, in the department or discipline of study: Credits only apply to a Vocational Credit certificate. Prerequisite: Permission of the instructor and department chairperson. (30-150 contact hours)

General Business

GEB0251 **Cultural Issues in Conducting Business Abroad** **1.00 credits**

This course will examine the development of culture and foster its understanding, and will identify various behavioral patterns and communications styles within different cultures. In addition, this course will focus on the enhancement of interpersonal sensitivities during the interactions with individuals of different ethnicity, gender, age, background, etc., and the impact of these differences when conducting international activities. Special fee. (30 contact hours)

Graphic Arts

GRA0420 **Computer Graphic Design** **4.00 credits**

This course is intended to train the desktop publishing student in programs that enable

one to create and manipulate graphic illustrations. The two standard programs that are used in the industry are utilized, with lab activities that highlight important program features. Special fee. (120 contact hours)

GRA0430
Desktop Publishing
4.00 credits

Desktop publishing is the production of high quality printed publications using relatively inexpensive equipment: personal computers, desktop scanners, and laser printers. This class explores the qualities and abilities of Aldus PageMaker, and industry-standard page layout program. Class lectures are supported with audiovisual presentation and extensive handouts. Lab classes consist of a series of typical page layout jobs. Special fee. (120 contact hours)

GRA0446
Principles of Typography
4.00 credits

Typography is the art of designing printed matter using type as a medium. The history and development of typography, the use of printer's measurements and the aesthetic uses of type will be covered in the lecture form. The production of learned through hands-on project assignments. Instruction also will include industry standard typesetting equipment and desktop publishing personal computers and software. Special fee. (120 contact hours)

GRA0451
Graphic Photography Processes
4.00 credits

Graphic photo processes-line is a basic course in the use of a graphic arts process camera, films, and chemistry. Numerous hands-on projects will include determining exposure and development times, enlargements and reductions, copying, scaling, print making, and proofing. Special fee. (120 contact hours)

GRA0452
Halftone Processes for Graphic Arts
4.00 credits

A halftone is a reproduction of a continuous tone photograph that has been

converted into dots of various sizes so it can be reproduced by any of the major printing processes. The various size dots are so small and numerous that they fool the eye into seeing shades of gray similar to a continuous tone photo. Numerous hands-on projects will cover the use of halftone screens and the manipulation of tones by controlled exposures and development procedures. Prerequisite: GRA 0451. Special fee. (120 contact hours)

GRA0457
Color Electronic Scanning
3.00 credits

This course requires Color Reproduction Technology 1 as a prerequisite. The course is an advanced approach to electronic methods to color reproduction. The student will learn state-of-the-art methodology for color printing. Prerequisite: GRA 0455. Special fee. (90 contact hours)

GRA0460
Graphic Design 1
4.00 credits

This is an introduction to the basic skill technique of visual communication problems such as those involving perspective, proportion, and representative drawing. Special fee. (120 contact hours)

GRA0461
Graphic Design 2
4.00 credits

This course trains on the process of quality layout and graphic design. It covers studio projects such as ads, brochures, and logo designs. The basics of formal graphic design are covered in a creatively professional standard. Special fee. (120 contact hours)

GRA0463
Graphic Design 4
4.00 credits

This is a problem-solving course in graphic communications. Studio projects such as self-identity campaigns, book covers, label design and similar are covered. Electronic publishing skills in packages as Illustrator, Freehand, and Photoshop are utilized. Special fee. (120 contact hours)

GRA0465
Digital Graphic Painter
4.00 credits

Students, working from photographs, represent the natural world on the newest artistic media: the personal computer. Fractal Design's Painter software enables student to use a wide variety of digital tools and surfaces to create electronic illustrations. Special fee. (120 contact hours)

GRA0472
Offset Stripping 2
4.00 credits

This is a vocational credit course that is an advanced course in film assembly for multi-color and 4 color process film assembly using the emulsion-up method. Hands-on projects will range from simple mechanically separate (fake color) projects to 4-color process separations for an 8 page brochure. This course is highly recommended because of the increased demand for color within the advertising field. Special fee. (120 contact hours)

GRA0481
Paper in Graphics
1.50 credits

This course is a review of the various types and specifications of paper that are used for various types of graphic production tasks. The course is appropriate also for upgrading for persons involved in purchasing departments. Special fee. (45 contact hours)

GRA0840
Web Page Design One
4.00 credits

An introduction to the technologies and techniques of designing for the World Wide Web. This course covers all the key elements of Web design from concept to completion. The course also covers a basic introduction to WYSIWYG HTML editors. Special fee. (120 contact hours)

GRA0948
Co-Op Work Experience: GRA
1.00 - 3.00 credits

This is a course designed to continue training in a student's field of study through

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work experience. Students are graded on the basis of documentation of learning acquired as reported by student and employer. Prerequisite: Co-op departmental approval and completion of GRA 0948 co-op work experience. Students will be assigned specific course prefixes related to their academic major prior to registration. All students must contact the co-operative education office to obtain registration approval. Special fee. (30-90 contact hours)

GRV0540 **Advanced Electronic Publishing** **4.00 credits**

This is a high-end electronic publishing program whose features include extremely tight typographic and photographic controls. A series of job layouts will be executed in the lab. Special fee. (120 contact hours)

Health Information Management

HIM0001 **Introduction to Health Information Management** **4.00 credits**

This is an introductory course in the principles of health information management. Students will learn ethical aspects and components of the health record, proper documentation, purposes and uses; legal principles that govern the health information field including access to patients' records, confidentiality, and informed consent. (30-60 contact hours)

HIM0013 **Medical Law and Ethics** **1.00 credits**

This course focuses on the ethics of medicine and medical practice. Legal requirements and implications to the medical profession are stressed. Special fee. (30 contact hrs.)

HIM0061 **Medical Record Transcription 1** **1.50 credits**

This course covers the basic foundations of medical transcription to include role,

ethics and legal responsibilities of the transcriptionist. Equipment, types of medical reports, quality control and reference materials are also discussed. Special fee. (45 contact hours)

HIM0061L **Medical Record Transcription Applications 1** **6.00 credits**

This course is the applications for HIM 0031. Perfection of typing skills and correct use of basic transcription equipment. Prerequisite: HIM 0061. Special fee. (180 contact hours)

HIM0062 **Medical Record Transcription 2** **1.50 credits**

This course is an in-depth study of types of medical reports and their components, qualitative and quantitative control standards and phraseology and language of various medical specialties. Special fee. (30-60 contact hours)

HIM0062L **Medical Record Transcription Applications 2** **6.00 credits**

This course is the applications for HIM 0032. Transcription from selected medical specialties. Prerequisite: HIM 0062. Special fee. (180 contact hours)

HIM0063 **Medical Record Transcription 3** **1.00 - 2.00 credits**

This course focuses on the reports and terminology used primarily in pathology and autopsy procedures. Employability skills will also be discussed. Special fee. (30-60 contact hours)

HIM0063L **Medical Record Transcription Applications 3** **2.00 - 7.00 credits**

This course is the laboratory for HIM 0033. Transcriptions of reports and paraphrasing according to the content of dictation and terminology used in pathology and autopsies. Basic principles of word processing are practiced. A level of speed and accuracy

consistent with employment standards is required. Prerequisite: HIM 0063. Special fee. (60-210 contact hours)

HIM0220 **ICD-9-CM Coding 1** **1.00 credits**

The organization and development of nomenclatures and classification systems. Introduction to the international classification of disease (ICD-9-CM), volumes 1, 2, and 3. The characteristics and conventions of ICD-9-CM. Special fee. (30 contact hours)

HIM0220L **ICD-9-CM Coding Applications Laboratory 1** **1.00 credits**

This course deals with the application of the basic principles, characteristics and conventions of ICD-9-CM. Special fee. (30 contact hours)

HIM0228 **ICD-9-CM Coding 2** **1.50 credits**

This course focuses on the analysis and coding of diagnosis, procedures and symptoms with ICD-9-CM. Definitions and principles of the Uniform Hospital Discharge Data Set (UHDDS) with emphasis on assignments of the principal diagnosis and sequencing. Special fee. (45 contact hours)

HIM0228C **ICD Coding Systems** **5.00 credits**

This is a core International Classification Disease (ICD) coding course. Students will learn ICD coding systems using sample exercises and medical records to develop skill and accuracy in coding in various health care settings, including use of official coding guidelines and reporting requirements appropriate to the coding situation. Corequisite: HIM 0472. (150 contact hours)

HIM0228L **ICD-9-CM Coding Applications Laboratory 2** **2.00 credits**

This course focuses on analyzing and coding of diagnosis, procedures, and symp-

toms with ICD-9-CM. Application of principles of the Uniform Hospital Discharge Data Set (UHDDS), selection of the principle diagnosis, and sequencing. Prerequisite: HIM 0220L; corequisite: HIM 0228. Special fee. (60 contact hours)

HIM0230 **ICD-9-CM Coding 3**

1.50 credits

The relationship of diagnosis related groups (DRGs) and the Protective Payment System (PPS) to coding. The components of the DRG system and the Protective Payment regulations. Procedures for ensuring data quality. Special fee. (45 contact hours)

HIM0230L **ICD-9-CM Coding Applications 3** **Laboratory**

2.00 credits

This course focuses on the application of the Prospective Payment Regulations for DRG validation assignment of the DRGs and procedures for ensuring data quality. Prerequisite: HIM 0228L; corequisite: HIM 0230. Special fee. (60 contact hours)

HIM0250 **Current Procedural Terminology (CPT-4) Coding**

1.50 credits

Current procedural terminology (CPT-4) coding principles are emphasized. The course will involve activities in which medical record professionals code and classify procedures in CPT for purposes in standardization, retrieval, and statistical analysis. Special fees. (45 contact hours)

HIM0250C **Ambulatory Care Coding Systems**

2.00 credits

This is an introductory course on coding using HCPCS/CPT systems in the ambulatory care environment. Students will learn ambulatory care coding of all body systems, coding guidelines and reporting requirements, using sample exercises to develop skill and accuracy. Prerequisites: HIM 0472, 0228C. corequisite: HIM 0285C. (60 contact hrs.)

HIM0271 **Computerized Medical Insurance Billing**

1.50 credits

Computers in the medical office and their use in billing insurance are the focus of this course. Electronic claims transmission and how it affects cash flow in the medical office is explored. The advantages of a computer system versus a manual system are discussed. Special fee. (30 contact hours)

HIM0271L **Computerized Medical Insurance Billing Applications**

1.50 credits

This course addresses applications for automated medical insurance billing. The student will learn how to file medical insurance claims using one or more medical insurance billing software programs. Electronic claims transmission is explored. Emphasis is placed on understanding the insurance claim process from beginning to end. Corequisite: HIM 0271. Special fee. (45 contact hours)

HIM0274 **Health Insurance Claims/Delinquent Claims and Problem Solving**

1.50 credits

This course reveals how insurance claims are developed and processed from the health care provider's office to the insurance company. Delinquent claims and solving common billing problems are explored. Various health plans are discussed. Prerequisites: HIM 0228, 0228L; corequisites: HIM 0230, 0230L. Special fee. (45 contact hrs.)

HIM0274C **Health Care Billing and Reimbursement**

4.00 credits

This is a foundation course in healthcare reimbursement. Students will learn the reimbursement methods and concepts related to healthcare and prospective payment system including DRGs, APCs and ASC groups, patient billing and accounting software in claims processing, compliance, the role HIM plays in the Charge master main-

tenance and revenue cycle. Prerequisite: HIM 0650. (120 contact hours)

HIM0280C **Physician Coding**

2.00 credits

This course will examine coding, data quality, and physician services billing. Students learn to read and interpret physician office documentation. Special emphasis is placed on assigning Evaluation and Management (E/M) codes, outpatient diagnostic coding guidelines, Current Procedural Terminology (CPT), Health Care Financing Administration Common Procedure Coding Systems (HCPCS) codes, and local codes. Prerequisite: HIM 0250; corequisites: HIM 0271, 0271L. Special fee. (60 contact hrs.)

HIM0290C **Advanced Coding Systems**

3.00 credits

This is an advanced course in ICD, CPT and HCPCS coding systems. Students will learn guidelines and applications to more complex case studies and health records according to current ethical standards of practice, Inpatient and Outpatient Prospective Payment Systems, encoding software and grouper practice applications. Prerequisite: HIM 0228C. Corequisite: HIM 0250C. (90 contact hours)

HIM0434 **Basic Principles of Disease**

2.00 credits

This is a basic course in human disease. The student will learn all body systems diseases and conditions, including etiology, clinical features, therapy and prognosis; basic pharmacology by body systems including antivirals, antibiotics, vaccines, immunizations, and chemotherapy agents. Prerequisite: HIM 0450. (60 contact hours)

HIM0450 **Human Anatomy & Physiology for Health Information Management**

2.00 credits

The structure and functions of the systems of the human body are emphasized.

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Includes the dynamics of physiology, terminology and physiological relationships of the systems. Special fee. (60 contact hours)

HIM0473

Medical Terminology

2.50 credits

This is a foundation course in the structure of medical terms with emphasis on spelling, pronunciation and definition. Students will learn medical terms related to major disease processes diagnostic procedures, laboratory tests, abbreviations, drugs and treatment modalities. Corequisite: HIM 0228C. (75 contact hours)

HIM0615

Computer Operations for Medical Applications

1.00 credits

This course provides instruction in basic word-processing skills that are required to perform computer operations in health care facilities. Special fee. (30 contact hours)

HIM0650

eHealth Care Delivery Systems

3.70 credits

This is an introductory course in basic computer software skills. Students will learn about commonly available software tools used in healthcare, including introduction to encoding tools and computer assisted coding software, electronic health record processes and the unique computerized systems environment found in U.S. health-care delivery systems. (60 contact hours)

HIM0801

Medical Record Transcription Clinical Practice

5.00 credits

This course focuses on the clinical practice in various health care settings in the community. The student will utilize all types of medical transcription procedures in preparation for transition into the work place. Special fee. Prerequisites: HIM 0061, 0061L, 0062, 0062L. (150 contact hours)

HIM0817

Professional Practice Experience

3.80 credits

This course is an advanced coding/billing professional practice. Students will learn advanced coding and abstracting of actual inpatient and outpatient health records, with an emphasis on compliance and improving accuracy and productivity. Prerequisite: HIM 0228C, 0250C, 0285C. (120 contact hours)

Health Science

HIM0009

Introduction to Health Information Technology

3.00 credits

This course introduces students to health informatics and information management. Students will learn about the health care delivery system, communication skills, legal and ethical responsibilities, HIPAA and health records, and terminology related to health informatics. Other topics include developing leadership and teamwork skills and the application of critical thinking skills in a variety of presented scenarios. (90 contact hours)

HSC0003

Introduction to Health Care

2.50 credits

An introduction to the health care environment, this course focuses on the health care team and delivery systems. Students will learn about legal responsibilities, ethical issues, safety, infection control, communication, interpersonal behaviors, wellness, and disease. Corequisite: HSC0003L (75 contact hours)

HSC0003L

Introduction to Health Care Laboratory

0.50 credits

This course focuses on the performance of basic health care skills. Students will apply body mechanics and ergonomics, standard precautions used in infection control procedures and perform and record vital signs. Corequisite: HSC0003 (15 contact hours)

Management

MAN0001

Introduction to Management

2.50 credits

This course is designed to provide an introduction to Management and its basic functions. Topics include human relations, entrepreneurship, goal setting and planning, decision making and motivation, and counseling in problem situations. Special fee. (75 contact hours)

MNA0789

Presentation Skills Business

1.00 credits

This course intends to make the participant aware of the specific steps necessary for making an oral or written communication. Special fee. (30 contact hours)

MNA0991

Selected Studies

1.00 - 5.00 credits

This course is designed to offer an in-depth treatment of special areas under the various occupational categories: it may be varied each term according to faculty and student planning. This offering is numbered 0991, with prefix of the subject area, in the department or discipline of study: Credits only apply to PSAV certificate. Prerequisite: Permission of the instructor and department chairperson. (30-150 contact hours)

Marketing

MKA0011

Survey of Marketing

2.50 credits

This course represents the key role of marketing in today's business-oriented society. The participant is required to apply the basic concepts of marketing to a local business enterprise, and hands-on application is the focus of the course. Special fee. (75 contact hours)

MKA0023

Effectiveness in Sales

1.00 credits

This course helps participants identify strengths and weaknesses in sales effec-

tiveness, analyzes one's sales approach with a selected customer, helps improve negotiating skills, and review suggestions from experts in salesmanship. Special fee. (30 contact hours)

MKA0061
Strategic Marketing for the Small Business
2.50 credits

The course provides strategic and practical applications for the small business owner and entrepreneur. Topics to be covered are marketing mix, small business marketing, low cost media marketing strategies, recession planning, and the development of a marketing plan. Special fee. (75 contact hours)

MKA0242
Export/Import Marketing Introduction
2.50 credits

This is a practical course designed to assist the participant enter the field of importing and exporting in a metropolitan that is of the major international marketing areas in the world. A step-by-step application of procedures is followed. Special fee. (75 contact hours)

MKA0243
Introduction to Foreign Trade
1.00 credits

This course will serve as an overview of the international business environment and the institutions which affect business in the international arena. International economic, political, cultural, and trade business issues will be analyzed and international business theory will be introduced within a practical application format. A broad view of the international economy will be included as well as the importance and impact of economic interdependence. Special fee. (30 contact hours)

MKA0244
Gathering Facts for International Marketing
1.00 credits

This course will help participants identify profitable international markets and business areas, as well as new product lines.

Sources of information for successful international marketing will be identified and discussed. Special fee. (30 contact hours)

MKA0245
Import/Export 1
1.00 credits

This is a nuts and bolts class for the novice and the experienced importer or exporter. The student will learn how to start and maintain an import/export company, how to identify the market, find the supplies and customers, and buy and sell overseas. Special fee. (30 contact hours)

MKA0246
Import/Export 2
1.00 credits

This is a continuation of Import/Export 1. Previous topics will be reviewed and will continue with these topics; buying and selling overseas, how to ship and document correctly, maintaining business records, what taxes are to be paid, and to make a profit. Special fee. (30 contact hours)

MKA0516
Public Relations
2.50 credits

The goal of Public Relations, is for students to gain valuable skills and insights related to the Public Relations professional, which will enable them to become more productive employees and entrepreneurs. Students will gain insight into business problem analysis, and will receive practical experience in both written and oral communication skills. Special fee. (75 contact hours)

MKA0623
Food Store Sanitation
1.50 credits

This course provides food store personnel with a comprehensive understanding and basic knowledge needed to plan and implement a workable sanitation plan and to show how to keep it going while saving money too. Special fee. (45 contact hours)

MKA0624
Food Store Security
1.00 credits

This course provides food store personnel with a comprehensive procedures and policies to follow to prevent employee theft, vendor theft, front end losses, shoplifting, robberies, and burglaries, thereby reducing figures and increasing store profits. Special fee. (30 contact hours)

MKA0625
Food Merchandising: Principles and Practices
1.50 credits

This course provides food store personnel with a comprehensive understanding of the basic principles underlying food merchandising practices in the United States. Special fee. (45 contact hours)

MKA0626
Grocery Management Operations
1.00 credits

This course provides practical instruction in essential management areas such as inventory management, merchandising, operating for profit, as well presenting a product breakdown of the grocery department such as dairy, frozen foods, general merchandise, health and beauty aids. Special fee. (30 contact hours)

Massage Therapy

MSS0156
Anatomy and Physiology for Massage Therapy
2.50 credits

This course will focus on the relationship between the anatomical and physiological effects of massage therapy on the body. Students will focus on the structure of organs, muscles, bones and tissues. Primary focus will center on the musculo-skeletal system and innervations. Special fee. (75 contact hrs.)

MSS0156L
Anatomy and Physiology for Massage Therapy Laboratory
2.50 credits

This course will examine the practical application and physiological effects of

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massage therapy on the body. Students will focus on the structure of organs, muscles, bones and tissues. Primary focus will center on the musculo-skeletal systems and innervations as well as clinical pathologies related on those systems. Special fee. (75 contact hrs.)

MSS0215 **History and Standards for Massage Therapy** **1.00 credits**

This course examines the history and development of massage therapy, basic legal concepts related to health care employment, and legal requirements for practice as a Massage Therapist in the State of Florida. Special fee. (30 contact hrs.)

MSS0250 **Introduction to Massage Therapy** **1.00 credits**

This course focuses on the theories and principles of therapeutic massage. The Massage Therapist/Client Relationship, the effects on massage on the systems of the body, massage facilities, equipment/supplies, and furniture requirements will be discussed. Special fee. (30 contact hrs.)

MSS0250L **Introduction to Massage Therapy Laboratory** **6.00 credits**

Laboratory for MSS 0250. This course provides opportunities for the practical application of the theories and principles of therapeutic massage. Special fee. (180 contact hrs.)

MSS0281 **Allied Modalities** **3.50 credits**

A study of the advanced theories and techniques for massage therapy. Content includes: oriental bodywork, reflexology, trager approach, rolfing, cranio sacral therapy, infant massage, pregnancy massage and aromatherapy. Special fee. (105 contact hrs.)

MSS0300 **Hydrotherapy Modalities** **1.00 credits**

This course focuses on the history and development of hydrotherapy, application in equipment used, and the associated standards. Special fee. (30 contact hrs.)

MSS0300L **Hydrotherapy Modalities Laboratory** **1.50 credits**

This course presents opportunity for the students to safely and effectively apply various types of hydrotherapy and evaluate their effectiveness. Special fee. (45 contact hrs.)

MSS0803C **Massage Therapy Clinical Practicum** **3.00 credits**

This course provides the student with the opportunity to practice and further develop an understanding of various massage techniques in a clinical placement setting under supervision of a licensed Massage Therapist. Special fee. (90 contact hrs.)

MSS0995 **Massage Therapy - Accelerated** **13.50 credits**

This course is designed to provide PSAV credit for students with training and State of Florida licensure as a Physical Therapist or Physical Therapist Assistant. Students must provide documentation of a current state license and be a graduate of an accredited program. This course requires special permission and students must contact the program coordinator for registration approval. (240 contact hrs.)

MSS0996 **Massage Therapy - Transitional** **8.00 credits**

This course is designed to provide PSAV credit for students with training and State of Florida licensure as an Allied Health Professional or Registered Nurse. Students must provide documentation of a current state license and be a graduate of an approved Associate Degree program. This course requires special permission and students must contact the program

coordinator for registration approval. (240 contact hrs.)

Mathematics - Vocational Level

MTB0102 **Business Mathematics** **2.50 credits**

This course is a review of basic mathematics: in business. Topics include but are not limited to the following: cash and trade discounts, commissions, mark-up, depreciation, interest and bank discounts, payroll records, taxes, analysis of financial statements, stocks and bonds, inventory calculations, notes and installment credit, bank records, annuities, and sinking funds. Special fee. (75 contact hours)

Medical Assisting

HIM0540 **Electrocardiography/Emergency Procedures** **2.00 credits**

The nature and purpose of the electrocardiograph (EKG); maintenance of equipment and materials needed; preparation of the patient and the procedure for taking and mounting the EKG record and monitoring the record for abnormal or erratic tracings. The maintenance of emergency equipment and implementing emergency procedures in the medical office. Special fee. (60 contact hours)

MEA0204 **Theoretical Aspects of Clinical Skills** **1.00 credits**

This course is designed to develop and further support students' knowledge and ability to organize and work efficiently and effectively in both performing and assisting with clinical procedures performed in medical offices. Emphasis will be on the role and responsibility of the Medical Assistant. (30 contact hours)

MEA0204L
Application of Clinical Skills
2.00 credits

This course is designed to develop and support students' ability to perform and assist in basic clinical skills. Emphasis will be on the role and responsibility of the medical assistant in performing sterile techniques and the use of organization and efficiency in performing and assisting with patient examination, sterile procedures, and diagnostic procedures and treatment performed in medical offices. Special fee. (60 contact hours)

MEA0231
Anatomy and Physiology and Medical Terminology
2.30 credits

This course is designed to introduce the student to basic anatomy and physiology and to develop the ability to communicate verbally and in writing within the medical field. Special fee. (69 contact hours)

MEA0234
Pathophysiology & Disease for Medical Assistants
4.00 credits

This course is designed to introduce students to common diseases and medical conditions which affect patients who present themselves to medical offices for diagnosis and treatment. Emphasis will be on the role and responsibility of the Medical Assistant in prevention, diagnosis, and treatment. (120contact hours)

MEA0242
Pharmacology for the Medical Assistant
3.00 credits

This course is designed to introduce students to principles of pharmacology and provide a basis to comprehend the role and responsibility of Medical Assistants in administering medication. Emphasis will be placed on calculation of dosages, frequently used drugs, and classification of drugs as they relate to the body systems. Special fee. (90 contact hours)

MEA0254
Physician Office Laboratory Procedures
2.00 credits

Theoretical concepts of specimen collection and processing. This course focuses on the fundamentals of diagnostic tests, including urinalysis, basic office bacteriology, hematology, and blood chemistry. The principles of aseptic techniques, infection control, and safety procedures are discussed. Compliance with quality assurance practices are emphasized. (60 contact hours)

MEA0254L
Physician Office Laboratory Procedure Applications
2.00 credits

A clinical laboratory course designed for the Medical Assistant student to practice specimen collection, microscopy and urinalysis. Includes basic office bacteriology, hematology, and blood chemistry. The student will apply principles of aseptic techniques and infection control. Special fee. (60 contact hours)

MEA0258
Radiology for the Medical Assistant
3.00 credits

This course focuses on the basic principles of x-ray, film handling and processing, radiographic technique, and radiation biology. The course prepares the student to take the examination given by the Florida Department of Professional Regulations (DPR) for the Basic Radiographer License. Special fee. (90 contact hours)

MEA0322
Office Management and Professional Issues for the Medical Assistant
3.00 credits

Office management procedures, including planning and organization; financial and medical record keeping procedures; billing and collection; processing insurance claims using procedural and diagnostic coding. Legal and ethical responsibilities; credentialing and other professional issues of Medical Assisting. Special fee. (90 contact hours)

MEA0334C
Medical Coding/Insurance Billing with Collections
4.00 credits

Processing health insurance claims using procedural and diagnostic coding. The student will learn and apply current government regulations affecting third-party reimbursement. Billing, electronic claims transmission, and collection systems are emphasized. Special fee. (120 contact hours)

MEA0343
Computers in the Medical Office
3.00 credits

The application of computer concepts to medical office practices. The student will keyboard documents using word processing software. Emphasis will be on operating transcription equipment and transcribing medical records. The student will also be introduced to electronic spreadsheet and database applications. Special fee. (90 contact hours)

MEA0540
Electrocardiography/Emergency Procedures
2.00 credits

The nature and purpose of the electrocardiograph (EKG); maintenance of equipment and materials needed; preparation of the patient and the procedure for taking and mounting the EKG record and monitoring the record for abnormal or erratic tracings. The maintenance of emergency equipment and implementing emergency procedures in the medical office. Special fee. (60 contact hours)

MEA0802
Clinical Externship for the Medical Assistant
3.00 credits

This course is designed to provide students with experiences in the practice of the clinical aspect of medical assisting. Students will be assigned to physician's office or clinics where they will provide direct patient care under the guidance of an experienced Medical Assistant. Special fee (90 contact hours)

MEA0810

Administrative Externship for the Medical Assistant

3.00 credits

The student is assigned to a physician's office, clinic, laboratory, or other community health care facility. Emphasis is on integrating basic administrative skills demonstrated in previous courses. (90 contact hours)

MEA0832

Diagnostic Externship in Medical Assistant

3.00 credits

This course is designed to provide students with experiences in the diagnostic aspect of Medical Assisting. Students will be assigned to physician's office or clinics where they will perform diagnostic clinical laboratory procedures, electrocardiographic and basic x-ray procedures under the guidance of an experienced Medical Assistant. Special fee. (90 contact hours)

Medical Laboratory Technology

MLT0041

Phlebotomy Theory

0.50 credits

This course covers the theory of phlebotomy techniques by venipuncture and skin puncture. This includes basic anatomy and physiology of the circulatory system, types of tubes to select for various blood tests, possible interfering substances, hospital hierarchy, professionalism, risk factors for Hepatitis, AIDS, and all sexually transmitted diseases, infection control guidelines, and employability skills. Special fee. (15 contact hours)

MLT0048

Phlebotomy Practicum

1.50 credits

This course is designed to prepare students to draw blood by venipuncture and capillary puncture and to prepare them for employment in a hospital laboratory, blood center, or other health care facility. Students are taught safe and efficient work practices in obtaining adequate and correct blood specimens, label-

ing specimens, and transporting specimens correctly to the appropriate laboratory sections. The Center for Disease Control (CDC) guidelines for HIV/AIDS, Hepatitis B and other diseases are stressed. (45 contact hours)

MLT0061

Practical Aspects of Phlebotomy

0.50 credits

This course covers the collection of blood by venipuncture, skin puncture and donor room techniques. This includes the handling, labeling, transporting, and logging-in of specimens as well as the demonstration of correct infection control techniques. Special fee. (15 contact hours)

Pharmacy Technician

PTN0003

Introduction to Pharmacy Practice & Medical Terminology

3.00 credits

This course is an orientation to the overall functions and services of a hospital pharmacy. Students will learn medical abbreviations, terminology, chemical symbols, formulas, and incompatibilities. Prerequisite: HSC 0003; corequisite: PTN 0006. (90 contact hours)

PTN0004

Pharmacy Practitioner Applications

3.00 credits

This course focuses on pharmacy practitioner applications. Students will learn to develop skills relating to the specific, technical, manipulative and clerical tasks involved with the preparation and distribution of medications under the supervision of Licensed Pharmacists. Prerequisite: HSC 0003; corequisite: PTN 0021. Special fee. (90 contact hours)

PTN0006

Pharmacy Calculations

3.00 credits

This is a course in Pharmacy Calculations. Students will learn to define systems of measurement, convert from one system to another, and calculate pharmacology problems. Prerequisite: HSC 0003; corequisite: PTN 0003. (90 contact hours)

PTN0021

Drug Classifications

3.00 credits

This course covers the major classifications of pharmaceuticals, standards for quality and purity of drugs, and authoritative information on dosage and administration. Students will learn about poisons, placebos, and the sources from which medications are produced. Prerequisites: HSC 0003, PTN 0003, 0006; corequisite: PTN 0004. (90 contact hours)

PTN0041

Pharmacy Technician Hospital Field Experience

10.00 credits

This course covers clinical hospital training to develop the student's knowledge and skills on the job. Students will learn how to properly prepare doses of medications and intravenous admixtures. Prerequisites: HSC 0003, PTN 0003, 0004, 0006, 0021; corequisite: PTN 0049. (300 contact hours)

PTN0049

Pharmacy Technician Retail Store Field Experience

10.00 credits

This course covers the clinical field experiences in a retail establishment. Students will learn about pharmaceutical chemistry, proper medication, and how to deliver medications correctly. Prerequisites: HSC 0003, PTN 0003, 0004, 0006, 0021; corequisite: PTN 0041. (300 contact hours)

Student Life Skills

SLS0270

Practical Leadership Skills

1.00 credits

This course employs a small-group approach to improve leadership skills of individuals training for supervisory positions. Students will improve in problem identification and resolution, planning, and effective methods of communication with subordinates and co-workers. Special fee. (30 contact hours)

SLS0341
Employability Skills
1.00 credits

This course teaches the student the skills necessary to conduct a successful job search and to be successful in a job requiring positive human relation skills. Clothing, behavior, personal presentation and interpersonal relations are covered. Special fee. (30 contact hours)

Surveying

SUR0001
Construction Survey
4.00 credits

This course focuses on the practice of surveying as related to the Building and Construction industry. This course includes a combination of classroom and practical field problems with the tape, level and transit. Lab time is required. Special fee. (120 contact hours)

Transportation and Traffic Management

TRA0701
Transportation/Geographical Considerations
1.00 credits

This course will address the logistics for import and export. Types of pallets, air and sea containers, railroad shipping and inland freight will be discussed. Cargo consolidation for air and sea transport will be addressed as well as types of insurance required. Evaluating service from brokers, forwarders, and steam lines will also be addressed. In addition, geographical concepts will be addressed with the relative location of regions and nations evaluated in terms of specific physical environments, political and economic trends, demography and utilization. Ports of entry and other geographical considerations related to trade will also be examined. Special fee. (30 contact hours)

Vocational Preparatory

VPI0111
Vocational Preparatory Reading
1.00 - 6.00 credits

This course is intended for the student who has tested in at a level on the Test for Adult Basic Education (TABE) that requires some work to improve basic reading skills. Individualized work on a computer is prescribed to enable the student to test out at an appropriate level to be successful in a Vocational program. (30-180 contact hours)

VPI0211
Vocational Preparatory Mathematics
1.00 - 6.00 credits

This course is intended for the student who has tested in at a level on the (TABE) test that requires some work to improve basic math skills. Individualized work in a computer is prescribed to enable the student to test out at an appropriate level to be successful in a Vocational program. (30-180 contact hours)

VPI0311
Vocational Preparatory English
1.00 - 6.00 credits

This course is intended for the student who has tested in at a level on the (TABE) test that requires some work to improve basic language skills. Individualized work on a computer is prescribed to enable the student to test out at an appropriate level to be successful in a Vocational program. (30-180 contact hours)

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New World School of the Arts Administration - Executive

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New World School of the Arts Administration

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North Campus Administration

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West Campus Administration

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ACADEMIC DEFINITIONS AND MAPS

Academic Definitions

The following are definitions of terms with which the reader may not be familiar:

Academic Year: Beginning of the fall term to the end of the summer term; approximately from the end of August to the end of the following July.

Advanced Technical Certificate: These are state-approved advanced specialized programs designed for students who already have an Associate in Science degree and wish to supplement their degree.

Basic Skills Assessment: A test that enables the College to identify the student's academic strengths and weaknesses in reading, writing, and math skills to be used to provide advisement and placement in courses. See Computerized Placement Test (CPT).

College Credit: A unit of work in a subject, generally equivalent to one hour of class or two hours of laboratory a week for a regular sixteen (16) week term. Thus, a threecredit class meets for three class hours a week or two class and two laboratory hours. There is some variance in this rule for laboratory, clinical and studio courses.

College Credit Certificate Programs: These are state-approved programs that are an integral part of an Associate in Science/Associate in Applied Science degree program.

College-Level Academic Skills (CLAS): Eliminated on July 1, 2011, the CollegeLevel Academic Skills (CLAS) exam was administered from October 1982 to June 2009 to students seeking an Associate in Arts (A.A.), Bachelor of Arts (B.A.), Bachelor of Science (B.S.), or Bachelor of Applied Science degree from a Florida public college or university as a means of educational accountability that satisfied the mandates of Section 1008.29, F.S. Effective July 1, 2011, public postsecondary students are no longer required to successfully complete CLAS requirements in order to be eligible for graduation.

Computerized Placement Test (CPT): An untimed computerized test in four sections (Reading Comprehension, Sentence Skills, Arithmetic and Elementary Algebra) administered to assess the basic skills level of students entering a degree program.

Community Education Courses: Courses that do not award academic credit (noncredit), but are offered for persons who wish to improve their personal efficiency, professional or business related skills and competencies, or enrich their personal lives.

Continuing Education Unit (CEU): Miami Dade awards CEUs for successful completion of Continuing Education noncredit CEU activities. One CEU is awarded for 10 contact hours, and is recorded on the student's permanent record.

Corequisite: A course, which must be taken simultaneously with another course.

Curriculum: A specific program of study comprised of courses leading to a degree or certificate.

Developmental Education: Developmental Education courses address basic skills deficiencies and are designed to prepare students for college level work. Students are advised into these courses through self-referral, test scores and faculty referral. These courses do not satisfy degree requirements.

Elective: A subject or course, which a student may choose to take as distinguished from a "required course" in a program of study.

Full-Time Student:* A student who is enrolled for 12 credits or more in the 16week terms and six credits or more in the sixweek terms. Credits taken in a 12week term (summer A and summer B) count as half value in each sixweek term. Credits enrolled for audit or by departmental examination do not count in computation of fulltime status.

Grade Point Average: The ratio of grade points earned to credits attempted. (See grade point average in Academic Regulations section.)

Major: The designation given to the complete group of courses necessary to fulfill the requirements for graduation in a specific field of baccalaureate programs (i.e., Public Safety Management, Electronics Engineering, etc.).

Occupational Programs: College credit programs leading to an Associate of Science degree.

Pathways: A set of curriculum pathways developed

*In specialized circumstances, the College may define fulltime student status as less than the above. This special Collegedefined status would occur only in unusual circumstances related to the College's Standards of Academic Progress program.

with focused career choices and course sequences to increase transfer success and completion of career-oriented degrees and certificates.

Prerequisite: An academic requirement, which must be met before a certain course can be taken classes, selection of courses by day and hour and the payment of fees.

Semester: See Term.

Standards of Academic Progress: Standards of satisfactory academic performance.

Supplemental Vocational Education Courses: These courses are for students currently or previously employed in a job category where skill upgrading is required to maintain current employment or to advance within their career field.

TABE: Test of Adult Basic Education administered to students enrolled in Career Technical Education Programs.

Term: A subdivision of the academic year, i.e., fall, spring, summer A and summer B terms.

Major term: fall and spring, approximately sixteen (16) weeks each.

Short Term (summer A and summer B):** six (6) weeks each. Courses meet additional contact hours per

week during the summer A/summer B terms.

Transcript: A certified copy of the student's academic record.

Vocational Credit: A unit of work in a subject based on 30 contact hours of classroom participation (or equivalent for work experience).

Career Technical Education Programs (CTE): These programs are defined by the state of Florida and consist of courses valued in vocational credits. Career Technical Education programs are designed to lead to immediate job entry upon completion. Those who complete a Career Technical Education program receive a Career Certificate and are entitled to attend graduation exercises.

MAPS

<http://www.mdc.edu/about/campuses.aspx>

**Some courses are scheduled for the combined summer A/summer B term of 12 weeks.