Computer Programming and Analysis – Mobile Applications Development
Associate in Science | Code: 25070 | 60 credits
CIP (1511020101**)**
Effective Term: Spring 2025 (2253)

The Computer Programming and Analysis program provides an opportunity to establish a foundation in computer programming in scientific, commercial, industrial and government data processing applications. The Mobile Applications Development concentration additionally offers hands-on instruction with current technology for Apple and Android mobile device platforms. Graduates are prepared for positions as app developers.

GENERAL EDUCATION REQUIREMENTS (15.00 Credits)
COMMUNICATIONS (3.00 credits)

ENC 1101	English Composition 1	(3 credits)	Prerequisite: Student must meet the Developmental Education reading and writing requirements in State Rule 6A-10.0315 (by course, placement score, or eligible exemption).

HUMANITIES (3.00 credits)

ARH 1000	Art Appreciation	(3 credits)	
HUM 1020	Introduction to Humanities	(3 credits)	
LIT 2000	Introduction to Literature	(3 credits)	Prerequisite: ENC 1101
MUL 1010	Music Appreciation	(3 credits)	
PHI 2010	Introduction to Philosophy	(3 credits)	
THE 2000	Theatre Appreciation	(3 credits)	

MATHEMATICS (3.00 credits)

MAC 1105	College Algebra	(3 credits)	Prerequisite: MAT 1033♦

♦**Note:** Students must seek advisement for proper mathematics course from discipline chairperson.

NATURAL SCIENCE (3.00 credits)

AST 1002	Descriptive Astronomy	(3 credits)
BSC 1005	General Education Biology	(3 credits)
CHM 1020	General Education Chemistry	(3 credits)
ESC 1000	General Education Earth Science	(3 credits)
EVR 1001	Introduction to Environmental Science	(3 credits)
GLY 1010	Physical Geology	(3 credits)
OCE 1001	Introduction to Oceanography	(3 credits)
PHY 1020	General Education Physics	(3 credits)

SOCIAL SCIENCE (3.00 credits)

AMH 2010	History of the US to 1877	(3 credits)
AMH 2020	History of the US Since 1877	(3 credits)
POS 2041	American Federal Government	(3 credits)

COMPUTER COMPETENCY
Test type(s) needed:
Computer Competency Test (CCT)
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CGS 1060C	Introduction to Computer Technology and Applications

MAJOR COURSE REQUIREMENTS (21.00 Credits)

CGS 1060C	Introduction to Computer Technology and Applications	(4 credits)	
CGS 1540C	Database Concepts and Design	(4 credits)	
CIS 2331	Systems Analysis, Design and Implementation	(5 credits)	
COP 1334	Introduction to C++ Programming	(4 credits)	
COP 2800	Java Programming	(4 credits)	Prerequisite: COP 1047C, COP 1334, or COP 2270

PROGRAM CONCENTRATION CORE (16.00 credits)

COP 2654	iPhone Application Development 1	(4 credits)	Prerequisite: COP 1332 or COP 1334
COP 2658	iPhone Application Development 2	(4 credits)	Prerequisite: COP 2654
COP 2660	Android Application Development 1	(4 credits)	Prerequisite: COP 2800
COP 2662	Android Application Development 2	(4 credits)	Prerequisites: COP 2660 and COP 2800

PROGRAM ELECTIVES (8.00 Credits)

CAI*, CEN*, COP*, CTS*

CGS 2091	Professional Ethics and Social Issues in CS	(4 credits)
EET 1033C	Electrical Fundamentals	(4 credits)
GEB 1432	Applied Artificial Intelligence (AI) in Business	(3 credits)
PHI 2680	Artificial Intelligence (AI) Ethics	(3 credits)