Degree: Bachelor of Science

College: Science, Technology, and Business

Major: Applied Computing

Major Code: APCO

Concentration: Game Programming (GAPR)

Credits Required: 120

Minor: N/A

Minor Code: N/A

General Education

Foundations: (12 Credits)

Oral Communication: (3 Credits)
- ☐ COMJ 1010 Public Speaking

Quantitative Reasoning: (3 Credits)
- ☐ MATH 1510 Discrete Structures

Technological Literacy: (3 Credits)
- ☐ CMAC 1200 Problem Solving and Programming

Written Communication: (3 Credits)
- ☐ ENGL 1200 College Composition

Discoveries: (Credits 27)
At least two (2) disciplines must be represented within each of the three (3) categories.

Art/Humanities: (9 Credits)
- ☐ _____
- ☐ _____
- ☐ _____

Natural Sciences & Technology: (9 Credits)
- ☐ MATH 2410 Calculus I
- ☐ STAT 2020 Elements of Statistics
- ☐ _____

Social Sciences: (9 Credits)
- ☐ _____
- ☐ _____
- ☐ _____

Elective/Wellness & Personal Health: (3 Credits)
- ☐ CMAC 2000 Introduction to Cybersecurity

Competencies:

Applied Methodologies
- ☐ CMAC 4920 Senior Project II

Ethical Reasoning
- ☐ CMAC 3000 Principles of Responsible Computing

Information Literacy
- ☐ CMAC 4900 Senior Project I: Software Engineering

Intercultural Fluency
- ☐ _____

Keystone Experience
- ☐ CMAC 4920 Senior Project II

Quantitative Applications
- ☐ _____

Writing Intensive - Two (2) courses are required
- ☐ CMAC 4900 Senior Project I: Software Engineering
- ☐ **And** ENGL 3230 Technical Writing
  Or CMAC 3010 Structured System Documentation

Program Requirements

Required Major Courses: (33 Credits)

- ☐ CMAC 1240 Computer Programming I
- ☐ CMAC 2040 Object Oriented Programming
- ☐ CMAC 3000 Principles of Responsible Computing
- ☐ CMAC 3040 Data Structures
- ☐ CMAC 3090 Computer Architecture and Assembly Language
- ☐ CMAC 3140 Analysis of Algorithms
- ☐ CMAC 3200 Database Application Programming
- ☐ CMAC 3500 Web Programming I
- ☐ CMAC 4900 Senior Project I: Software Engineering
- ☐ CMAC 4920 Senior Project II
- ☐ ENGL 3230 Technical Writing
  - ☐ Or CMAC 3010 Structured System Documentation

Required Concentration Courses: (21 Credits)

- ☐ CMAC 3700 2D Game Programming
- ☐ CMAC 3720 3D Game Programming
- ☐ CMAC 3740 Mobile Application Development
- ☐ CMAC 3780 Computer Graphics
- ☐ CMAC 4200 Artificial Intelligence
- ☐ Select two (2) courses from the following:
  ART 2001, ART 2101, ART 3001, ART 3101, ART 3601, ART 3915, ART 3916, ART 4008, DGMT 1800, ENGL 2250, ENGL 2270, ENGL 2400, ENGL 3400, ENGL 3410, ENGL 3420, ENGL 3430, ENGL 3440, ENGL 3450, ENGL 4200.

Major Electives: (6 Credits) Select two (2) from the following:

CMAC 2100, CMAC 2600, CMAC 3180, CMAC 3320, CMAC 3380, CMAC 3580, CMAC 3640, CMAC 3730, CMAC 3830, CMAC 3990, CMAC 4000, CMAC 4120, CMAC 4140, CMAC 4180, CMAC 4250, CMAC 4500, CMAC 4640, CMAC 4680, CMAC 4950.

Free Electives: (18 Credits)

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____ 6/5/2025

Suggested Four Year Course Sequence

Year 1

Fall Semester

CMAC 1200 Problem Solving & Programming Constructs
ENGL 1200 College Composition
COMJ 1010 Public Speaking
MATH 1510 Discrete Structures
General Education Course

Spring Semester

CMAC 1240 Computer Programming I
CMAC 2000 Introduction to Cybersecurity
STAT 2020 Elements of Statistics
PHIL 3000 Formal Logic
Art/Writing Required Course

Year 2

Fall Semester

CMAC 2040 Object-Oriented Programming
Intercultural and Arts & Humanities /Social Sciences
General Education Course
General Education Course
Math leading towards MATH 2410

Spring Semester

CMAC 3100 Assembly Program/Comp. Organization
CMAC 3040 Data Structures
CMAC 3500 Web Programming 1
Art/Writing Required Course
Math leading towards MATH 2410

Year 3

Fall Semester

CMAC 3200 Database Programming
CMAC 3700 2D Game Programming
  ~Or~ CMAC 3720 3D Game Programming
CMAC Elective
ENGL 3230 Technical Writing
  ~Or~ CMAC 3010 Structured System Documentation
Free Elective

Spring Semester

CMAC 3140 Analysis of Algorithms
  ~Or~ CMAC 3740 Mobile App Development
CMAC 3780 Computer Graphics
  ~Or~ CMAC 4200 Artificial Intelligence
CMAC 3000 Principles of Responsible Computing
Free Elective
Free Elective

Year 4

Fall Semester

CMAC 3780 Computer Graphics
  ~Or~ CMAC 4200 Artificial Intelligence
CMAC Elective
Arts And Humanities/Social Sciences Course
Free Elective

Spring Semester

CMAC 4900 Senior Project 1
CMAC 4920 Senior Project II
CMAC 3700 2D Game Programming
  ~Or~ CMAC 3720 3D Game Programming
General Education Course
Free Elective