

# PROGRAMMING AND APP DEVELOPMENT

Thomas Gallagher, Program Director

Programming and App Development concentration emphasizes application development and business processes. Students learn to write software using an object-oriented programming paradigm for deployment to the web and the desktop. Relational database design, structured query language (SQL), and the ability to create applications which push and pull information from databases are highlighted. Graduates seek careers as computer support specialists, help desk technicians, web developers, software developers, and database administrators.

## Associate of Applied Science - Information Technology; Programming and App Development Concentration

### Missoula College

Degree Specific Credits: 60

Required Cumulative GPA: 2.0

Catalog Year: 2017-2018

### Summary

Information Technology Core Courses	28
Mathematics	3
Programming and App Development Option Requirements	23
Programming and App Development Directed Electives	6
Total Hours	60

### Information Technology Core Courses

Rule: All courses are required

Note: Completion of IT core courses fulfills requirements for CAS in computer support.

BGEN 105S	Introduction to Business	3
CSCI 105	Computer Fluency	3
CSCI 135	Fund of Computer Science I	3
CSCI 172	Intro to Computer Modeling	3
ITS 150	CCNA 1: Exploration	3
ITS 165	OS Commands and Scripts	3
ITS 210	Network OS - Desktop	3
ITS 280	Computer Repair & Maint.	3
ITS 289	Professional Certification	1
WRIT 101	College Writing I	3
Total Hours		28

Minimum Required Grade: C-

### Mathematics

Rule: Any Mathematics course level 115 or higher

### Programming and App Development Concentration Requirements

Rule: All courses are required

COMX 111A	Intro to Public Speaking	3
CSCI 113	Programming with C++ I	3
CSCI 136	Fund of Computer Science II	3
CSCI 215E	Social & Ethical Issues in CS	3
CSCI 221	System Analysis and Design	3
CSCI 240	Databases and SQL	3
ITS 298	Internship/Cooperative Educati	2
MART 232	Interactive Web II	3
Total Hours		23

Minimum Required Grade: C-

### Programming and App Development Directed Electives

Rule: Required; take a minimum of 6 credits

Note: Student must select at least two directed elective courses (minimum of 6 credits). Directed electives must be approved by student's advisor. Examples of directed electives may include courses from the ACTG, BGEN, COMX, CSCI, DDSN, ITS, or WRIT rubrics. A student may request substitution of other courses to fulfill the directed elective requirement provided a clear connection can be made between a course, a student's career objective, and the degree program. All substitution requests require departmental approval.

Minimum Required Grade: C-