

# COMPUTER PROGRAMMING CERTIFICATE

Minimum Required Grade: C-

Programming is an essential skill for solving problems in many fields. Programming gives maximum flexibility in processing and understanding data, constructing computational models, and building user friendly applications. Programming skills are in high demand in the marketplace. Completing this certificate could be the first step towards a career that involves software development.

Students will apply object-oriented principles to develop software systems. Students will learn to apply and program data structures like lists, trees, and hash tables. The elective course allows the student to learn about software engineering, web programming, mobile device programming, or user interface design.

## Post-Secondary Certificate - Computer Programming

### College of Humanities & Sciences

Degree Specific Credits: 12

Required Cumulative GPA: 2.0

Catalog Year: 2018-2019

### Summary

Code	Title	Hours
Required Courses		10
Elective Courses		3-4
<b>Total Required Credits</b>		<b>12</b>

### Required Courses

Code	Title	Hours
<b>Complete all of the following courses:</b>		
CSCI 135	Fund of Computer Science I	3
CSCI 136	Fund of Computer Science II	3
CSCI 232	Data Structures and Algorithms	4
Total Hours		10

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### Elective Courses

Code	Title	Hours
<b>Complete one of the following courses:</b>		<b>3-4</b>
CSCI 205	Programming Languages w/ C/C++	
CSCI 323	Software Science	
CSCI 340	Database Design	
CSCI 411	Advanced Web Programming	
CSCI 412	Game and Mobile App	
CSCI 443	User Interface Design	
Total Hours		3-4