Computer Information Systems-Software Developer Certificate

The Microcomputer Programmer/Analyst Certificate provides a foundation in skills needed to analyze business problems and develop software solutions using current industry standard development tools. The certificate provides an academic credential reflecting enhanced job skills for those seeking advancement in their information services career or for individuals with a prior degree in another discipline seeking a career change.

Suggested/Sample Course Sequence

The sequence taken by the student may vary depending on prerequisites, course availability, and personal/ professional responsibilities.

(Major Code 5180; State CIP Code 11.0201)

- Software Development (http://www.jccc.edu/academics/computers/software-development)
- Gainful Employment Data (http://www.jccc.edu/academics/computers/software-development/gainful-employment/Gedt.html)

First Semester

CS 134	Programming Fundamentals	4
or CIS 142	Beginning Programming using Python	
WEB 110	HTML and CSS	3
Total Hours		**7**

Second Semester

CIS 162	Database Programming*	4
CIS 204	UNIX Scripting and Utilities*	3
CS 200	Concepts of Programming Algorithms Using C++*	4
or CS 201	Concepts of Programming Algorithms using C#*	
or CS 205	Concepts of Programming Algorithms using Java*	
Note: Transfer students should take the language that transfers to their chosen school. Java or C# is recommended for most career students. C++ is recommended for embedded systems and Java for mobile development.		
Total Hours		**11**

Third Semester

CIS 242	Introduction to System Design and Analysis*	3
CIS 260	Database Management*	4
CIS 275	Web-Enabled Database Programming*	4
CS 235	Object-Oriented Programming Using C++*	4
or CS 236	Object-Oriented Programming Using C#*	
or CIS 240	Advanced Topics in Java*	
Total Hours		**15**

Total Program Hours: 33