

Computer Programming: Java Certificate of Achievement - Active

Department: Computer Science

Approval: February 2018

Effective Semester: Fall 2018

The program of study for the certificate in Computer Programming: Java includes instruction and practice in the Java programming language including database interaction, as well as software engineering practices. This course of study prepares students for entry-level positions in quality assurance and computer programming in a variety of settings.

Learning Outcomes

Upon completion of this program, students will be able to:

- Analyze problems and interpret technical specifications to create and program appropriate algorithmic solutions, utilizing the most appropriate features of Java.
- Write Java code for array-based and linked data structures that work with generics.
- Compare and contrast algorithms for efficiency.
- Predict the results of code using standard data structures with associated algorithms.
- Write Linux/Unix commands to manipulate files, directories, their contents and their permissions.
- Write multiple table database queries in SQL.
- Operate effectively within a team, gaining work experience.

The minimum time for completion of this certificate is 2 semesters. Completion time will vary based on student preparation and number of units completed per semester.

Courses Required for the Certificate of Achievement in Computer Programming: Java

Course	Units
Required courses:	
CS 111B - Programming Fundamentals: Java	4.00
CS 111C - Data Structures and Algorithms: Java	4.00
CS 160A - Introduction to Unix/Linux	2.00
CS 211S - Advanced Java: Standard Edition	3.00
Total:	13.00
Choose one of the following database courses:	
CS 150A - Introduction to SQL Databases and NoSQL	3.00
CS 151A - Oracle SQL Databases	3.00
CS 155A - MySQL Databases	3.00
CS 211E - Advanced Java: Enterprise	3.00
Total:	3.00
Choose one of the following Internship/Project Experience courses:	
CS 195/CNIT 195 - Software Development Practicum	3.00
CS 177 - Software Engineering	3.00
CS 198 - Industry Internship	1.00 - 4.00
CNIT 197 - Internship and Work Experience	1.00
CNIT 198 - Internship and Work Experience	2.00
Total:	1.00 - 4.00
Total:	17.00 - 20.00

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