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## **Java Programming - Skills Certificate**

*Units: 18-21*

(TOP Code: 070710; Academic Plan: C070712J)

This sequence of courses provides students with comprehensive training in high-demand programming languages and methodologies, including Visual Basic, Java, and Assembly language. Successful completion of the program will prepare students for an exciting career in software analysis, design, and development.

### PROGRAM STUDENT LEARNING OUTCOMES

1. Create a fully documented modular design with correct mathematical and logical operations suitable for implementation from a given program specification.
2. Create, deploy, and test a basic program with valid syntax and proper logical and mathematical functions using the Java programming language.
3. Design and implement solutions to a general-purpose problem using advanced programming techniques in the Java programming language.
4. Employ advanced constructs such as networking, multi-threading, and recursion to design and implement solutions to advanced computer science problems.

### PROGRAM REQUIREMENTS

Requirements for the Java Programming skills certificate may be met by completing 18-21 units of required courses with a grade of "C" or better.

### REQUIRED COURSES (18-21 UNITS)

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CS 101	(formerly CO SCI 103) INTRODUCTION TO COMPUTER SCIENCE	3
OR		
CIS 101	(formerly CO SCI 101) INTRODUCTION TO COMPUTERS AND THEIR USES	3
AND		
CS 111	(formerly CO SCI 108) PROGRAMMING IN VISUAL BASIC	3
CS 102	(formerly CO SCI 107) PROGRAMMING LOGIC AND DESIGN (INTRODUCTION TO PROGRAMMING)	3
CS 103	(formerly CO SCI 104) MATHEMATICS FOR PROGRAMMERS	3
CS 113	(formerly CO SCI 141) PROGRAMMING IN JAVA	3
CS 130	(formerly CO SCI 117) INTRODUCTION TO COMPUTER ARCHITECTURE AND ORGANIZATION	3
CS 213	(formerly CO SCI 142) ADVANCED PROGRAMMING IN JAVA	3