ACADEMIC AFFAIRS

Course Number: CSCI-111	Department: Engineering and Science Transfer
Course Title: Introduction to Java Programming Language	Semester: Fall Year: 2002

Course Objective	Competencies
1. Provide the first-time programmers an opportunity to learn programming using the Java programming language.	1.a. Identify the logical components of a computer 1.b. Express logic function in terms of binary arithmetic 1.c. Compare and contrast Java with other programming languages
2. Help students understand the significance of the Java programming language.	2.a. Identify the primary components of a Java program 2.b. Describe the software development process using top down and bottom up methodologies 2.c. Explain the three main aspects of the software development process: 2.c.1. Programming paradigms 2.c.2. Product development 2.c.3. Software development
3. Develop programming skills in the areas of object oriented and Java technology	3.a. From program specifications, create a working Java program that includes comments, correct variable declarations, syntax, and naming conventions: 3.a.1. Know what variables and constants are 3.a.2. Know what primitive and reference types are

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	3.a.3. Know what literal values means
	3.a.4. Know the naming conventions
	3.b.1. Know simple Java programming constructs:
	3.b.2. Know what if constructs are
	3.c. Know what while constructs are
	3.d. Create and compile a Java program the uses the if or switch statement
	3.e. Create and invoke methods in a Java Program, including methods with parameters
	3.f. Write a Java program that creates and accesses a one or two-dimensional array and its elements
	3.g. Write a Java program that includes overloaded methods
4. Explore the principles of object-oriented programming, including classes and inheritance.	4. Know what constructors are and write a Java program that includes them
	4.a. Know what inheritance and the "is a" relationship are and write a Java program that includes them
	4.b. Know what containment and the "has a" relationship is and write a Java program that includes them
	4.c. Know what abstract classes are and write a Java program that includes them
	4.d. Know what polymorphism is and write a Java program that uses it