

## COURSE OUTLINE OF RECORD

<b>Dept., Number</b>	CSC 2311	<b>Course Title</b>	Java Programming
<b>Semester Hours</b>	3	<b>Course Coordinator</b>	
<b>Year</b>	2006	<b>URL (if any):</b>	

### **Current Catalog Description:**

The course provides an introduction to the Java programming language. Topics includes: Java applications, applets, fundamental data types, objects, decisions, iteration, functions, classes, arrays, file I/O, Java class libraries, and packages. Prerequisite: CSC 1311

### **Textbook:**

JAVA Concepts by Cay S. Horstmann, John Wiley & Sons, Inc., 1998.

### **References:**

Java: How to Program by Deitel & Deitel

Java in a Nutshell by David Flanagan

An Introduction to JAVA Programming by Y. Daniel Liang

The Java Class Libraries by Patrick Chan & Rosanna Lee.

### **Course Goals:**

1. Appreciate and use Java as an object-oriented and World Wide Web-based general purpose programming language.
2. Understand the syntax and program structure of the Java language.
3. Be able to design Java application and applet programs using Java language and Java class libraries.

### **Prerequisites by Topic:**

1. Experience in designing computer programs.
2. Knowledge of the syntax and semantics of a high-level programming language.

### **Major Topics Covered in the Course (Number of Weeks):**

Introduction	0.5
Fundamental Data Types	1
Objects	2
Decisions	1.5
Functions,	2
Iterations,	2
Testing and Debugging	1
Classes	2
Arrays	2
Other Topics - Files, API, etc.	1

### **Laboratory Projects:**

Fundamental Data Types  
Objects  
Decisions  
Functions  
Iterations  
Testing and Debugging  
Classes  
Arrays  
Other Topics - Files, API, etc.

(1 to 2 weeks for each assignment)

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**Estimate Curriculum Category Content (Semester hours)**

<b>Area</b>	<b>Core</b>	<b>Advanced</b>	<b>Area</b>	<b>Core</b>	<b>Advanced</b>
Algorithms	1		Data Structures		
Software Design	1		Prog. Languages	1	
Comp. Arch.					

**Oral and Written Communication:**

Typically, every student is required to submit at least 1-2 written reports of 3-5 pages and to make oral presentations of 5-10 minutes duration. Each student may have to do the oral presentations/demonstrations on his/her project assignments.

**Social and Ethical Issues:**

You need to submit a 3-5 page paper dealing with the topics on the social and ethical issues. You may be required to give a brief talk on your paper. Some topics will be discussed in the class. These topics will be covered in approximately 20 minutes.

**Theoretical Content:**

**The theoretical concept will cover the following topics among others:**

Objects(1.0 hour), Classes, Inheritance, Polymorphism (1.0 hour), Other Topics - Files, API, Algorithms, etc. (2.0 hours)

**Problem Analysis:**

In each project assignment, students are required to write 1-2 pages of analysis and conclusion on their experiments on the project.

**Open-Ended Design:**

Students must use comments to clarify their programming designs on each project. You are encouraged to submit separate pages on the designs of your projects.