

## School of Computer Science

**Course Title:**  
**Computer Programming I**

**Date: October 3, 2007**

**Course Number: COP 2210**

**Number of Credits: 04**

<b>Subject Area:</b> Programming	<b>Subject Area Coordinator:</b> Jai Navlakha email: navlakha@cis.fiu.edu
<b>Catalog Description:</b> <a href="#">SCS Web page</a>	
<b>Textbook:</b> <b>Title: Big Java (Paperback)</b> <b>Author: Horstmann</b> <b>ISBN: 978-0470105542</b> <b>Publisher: Wiley</b> <b>Edition: 3rd</b> <b>Req'd/Rec'd: Required</b>	
<b>References:</b>	
<b>Prerequisites Courses: None</b>	
<b>Corequisites Courses: Includes a closed lab component</b>	

**Type: Required Common Prerequisite**

**Prerequisites Topics: None**

**Course Outcomes:**

- O1. Be familiar with the concepts of Objects & Classes**
- O2. Master the fundamental Java data types**
- O3. Master the Java selection and iteration constructs**
- O4. Master using String, ArrayList and Wrapper classes**
- O5. Master analyzing problems and writing Java program solutions to those problems using the above features**

**School of Computer Science  
COP 2210  
Programming I**

**Outline**

<b>Topic</b>	<b>Number of Lecture Hours</b>	<b>Outcome</b>
<ul style="list-style-type: none"> <li>• <b>Objects &amp; Classes</b> <ul style="list-style-type: none"> <li>○ Class variables</li> <li>○ Defining a class</li> </ul> </li> </ul>	<b>5</b>	<b>O1, O5</b>
<ul style="list-style-type: none"> <li>• <b>I/O with JOptionPane</b></li> </ul>	<b>3</b>	<b>O1, O5</b>
<ul style="list-style-type: none"> <li>• <b>Fundamental Java data types</b> <ul style="list-style-type: none"> <li>○ Primitive types</li> <li>○ Strings</li> <li>○ Wrapper classes</li> </ul> </li> </ul>	<b>5</b>	<b>O2, O5</b>
<ul style="list-style-type: none"> <li>• <b>Control structures</b> <ul style="list-style-type: none"> <li>○ Selection</li> <li>○ Iteration</li> </ul> </li> </ul>	<b>8</b>	<b>O3, O5</b>
<ul style="list-style-type: none"> <li>• <b>Methods</b> <ul style="list-style-type: none"> <li>○ Accessors &amp; Mutators</li> <li>○ Method parameters</li> </ul> </li> </ul>	<b>8</b>	<b>O1, O5</b>
<ul style="list-style-type: none"> <li>• <b>ArrayLists</b></li> </ul>	<b>8</b>	<b>O4, O5</b>

**Course Outcomes Emphasized in Laboratory Projects / Assignments**

<b>Outcome</b>	<b>Number of Weeks</b>
	<b>At least 7 assignments of 1.5 week duration are given In addition, students complete 10 1-hour in-lab exercises</b>
<b>O1</b>	Assignments 1 & 2. All other assignments incidentally.
<b>O2</b>	Assignment 3.
<b>O3</b>	Assignments 5 & 6. Assignment 7 incidentally.
<b>O4</b>	Assignment 4. Assignments 5, 6 & 7 incidentally.
<b>O5</b>	Assignments 1 through 7

**School of Computer Science  
COP 2210  
Programming I**

**Oral and Written Communication:  
None**

**Social and Ethical Implications of Computing Topics:  
None**

**Approximate number of credit hours devoted to fundamental CS topics**

<b>Topic</b>	<b>Core Hours</b>	<b>Advanced Hours</b>
<b>Algorithms:</b>	<b>1.0</b>	
<b>Software Design:</b>	<b>1.0</b>	
<b>Computer Organization and Architecture:</b>	<b>0</b>	
<b>Data Structures:</b>	<b>0</b>	
<b>Concepts of Programming Languages:</b>	<b>1.0</b>	

**Theoretical Contents:  
None**

**Problem Analysis Experiences:  
None**

**Solution Design Experiences**

7-8 Programming Assignments
10 1-hour Lab Exercises

**School of Computer Science  
COP 2210  
Programming I**

**The Coverage of Knowledge Units within Computer Science Body of Knowledge<sup>1</sup>**

<b>Knowledge Unit</b>	<b>Topic</b>	<b>Lecture Hours</b>
<b>PF 1</b>	<b>Control structures</b>	<b>8</b>
<b>PF 3</b>	<b>Primitive types</b>	<b>3</b>
<b>PF 3</b>	<b>ArrayLists</b>	<b>8</b>
<b>PF 5</b>	<b>I/O with JOptionPane</b>	<b>3</b>
<b>PL 6</b>	<b>Objects &amp; Classes</b>	<b>5</b>

<sup>1</sup>See <http://www.computer.org/education/cc2001/final/chapter05.htm> for a description of Computer Science Knowledge units

<sup>1</sup>See <http://www.computer.org/education/cc2001/final/chapter05.htm> for a description of Computer Science Knowledge units