

School of Computing and Information Sciences

Course Title: Programming in Java

Date: 2/12/2018

Course Number: COP 2250

Number of Credits: 3

Subject Area: Programming	Subject Area Coordinator: Tim Downey email: downeyt@cs.fiu.edu
Catalog Description: A first course in programming for IT majors. Syntax and semantics of Java. Classes and Objects. Object-oriented program development. Not acceptable for CS majors. This course will have additional fees.	
Textbook: Starting Out with Java 5: Control Structures to Objects; Gaddis	
References: None	
Prerequisites Courses: None	
Co-requisites Courses: None	

Type: Required

Prerequisites Topics: None

Course Outcomes:

1. Be familiar with concepts of Objects and Classes.
2. Master the fundamental java data types.
3. Master the java selection and iteration constructs.
4. Be exposed to arrays
- ~~3.~~
- 4.5. Master using String, ArrayList, and wrapper classes.
6. Master analyzing problems and writing java program solutions to those problems using the above features.
7. Be exposed to software testing and interactive debugging
8. Master complex Boolean expressions in selection and iteration constructs
9. Master good programming practices
10. Master methods, method parameters, and parameter passing

- ~~5.~~ (SAC will provide a list of best programming practices for instructors as a reference)

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Outline

Topic	Number of Lecture Hours	Outcome
<ul style="list-style-type: none"> • Java Fundamentals <ul style="list-style-type: none"> ○ History of Java ○ Basic introduction to java ○ Assignment statement ○ Output ○ Input using JOptionPane 	4	2
<ul style="list-style-type: none"> • Objects and Classes <ul style="list-style-type: none"> ○ Class Variables ○ Defining Classes ○ Class UML diagram ○ Access Specifiers, etc. ○ Types of methods & Method parameters ○ Accessor and Mutator methods 	10	1,5
<ul style="list-style-type: none"> • Data Types <ul style="list-style-type: none"> ○ Primitive Types ○ Type Conversion ○ Object type 	2	2
<ul style="list-style-type: none"> • String Class <ul style="list-style-type: none"> ○ Methods of the String Class ○ Immutable class 	2	4
<ul style="list-style-type: none"> • Conditional Statements <ul style="list-style-type: none"> ○ IF statements – different versions ○ Switch statement 	3	3
<ul style="list-style-type: none"> • Iterative Statements <ul style="list-style-type: none"> ○ While loops ○ Do loops ○ For loops 	5	3,5
<ul style="list-style-type: none"> • Arrays, ArrayList, Wrapper classes <ul style="list-style-type: none"> ○ Simple Arrays ○ ArrayList ○ Methods of ArrayList class ○ Sorting and Searching algorithms ○ Wrapper classes 	10	4,5

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Course Outcomes Emphasized in Laboratory Projects / Assignments

	Outcome	Number of Weeks
1	Introductory Java Outcome: 2	2
2	Selection and Iterative constructs Outcomes: 3,5	3
3	Objects & Classes Outcomes: 1,5	4
4	Arrays and ArrayList Outcomes: 4,5	2
5	Application of techniques to solve problems Outcomes: 5	3

Oral and Written Communication: No significant coverage

Number of written reports:

Approximate number of pages for each report:

Number of required oral presentations:

Approximate time for each presentation:

Social and Ethical Implications of Computing Topics

No significant coverage

Topic	Class time	Student performance measures