CIS/CSC 18A: Java Programming: Objects

Instructor: **Email**
Nicholas Rhodes   nicholas.rhodes@rccd.edu or rhodes.corp@gmail.com

Student Accommodations:
If you have a physical, psychiatric/emotional, medical, or learning disability that may impact your ability to carry out assigned course work, I urge you to contact the staff in the Office of Disabled Student Services at (951)222-8060. The office is located on the Riverside Campus, in the Administration Building. The DSP&S will review your concerns and determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Prerequisites: None
Advisories: CIS/CSC 5

Grades	Percent
Quizzes	40%
Homework	30%
Final	30%
Total	100%

Quizzes will occur throughout the course. There will be a series of programming assignments during the class. All assignments may only be checked off in in person to receive credit. Any assignment not checked off by the Thursday of the week they are due will get a 10% reduction for every week it is late. Cheating of any sort will not be tolerated. The policy is as follows: you may discuss homework assignments with fellow students provided nothing is written down and no code is viewed or written.

Textbook:
Java How To Program (late objects) | Edition: 10
Author: Paul Deitel, Harvey Deitel
ISBN: 9780132575652

The textbook is recommended but not mandatory. I highly encourage you to have the textbook for the course, it is an excellent book and will provide a good reference for you going forward. You do not necessarily need the 10th edition. The 9th edition will also do just fine.

Lab Participation requirement: Lab participation is mandatory. Each student must complete 18 hours of lab time. If a student fails to complete 18 hours of lab time, their grade will be an F for the course.

Student Learning Outcomes:
Upon completing this course you will be able to:

- Demonstrate an understanding of the Java IDE programming environment sufficient to write small to medium sized programs
- Demonstrate an understanding of the fundamentals of object-oriented development sufficient to create and use classes as the foundation of Java application programs.

Topics Covered:

1. Developing software in Eclipse
   - Creating a java project
   - Including jar libraries
   - Running a program
     i. Command line arguments
2. Control Structures
   - Algorithms
   - Primitive data types
   - If else logic
   - While loops
   - For loops
   - Switch statements
   - Do while loops
   - Boolean logic operators
3. Creating and using methods
   - Functions
     i. Return types
     ii. Input parameters
       1. Pass by reference vs pass by value
   - Recursion
   - Method overloading
4. Arrays in Java
   - Declaration
   - Allocation
   - 1 dimensional versus multi-dimensional arrays
5. Classes and objects
   - Member variables
   - Private, protected, public modifiers
   - Static keyword
   - Class scope
   - Creating packages
   - Abstraction
   - Information hiding
6. Object oriented programming
   - Inheritance
   - Superclasses and subclassing
   - interfaces
7. Graphics and Java2D
8. Packaging software
   - Creating jars
   - Running via command line
9. Good programming practices:
   - Comments
   - Pseudo code
   - Unit testing
   - Good variable names