Course Description

Course Code: INF 218

Course Title: Object Oriented Programming

Department: Computer Science & Information Technology

Credit hours: 3

Contact Details

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Pre-requisite Course: VB

Course Description

The course is an introduction to programming using the object-oriented language Java. This course teaches students how to develop Java applications. Students will develop and test java applications using the **netbeans IDE**. After completing the course, students will learn the fundamentals of object-oriented software engineering and development, such as classes, inheritance and polymorphism.

Objectives

- To introduce problem solving using an object oriented programming paradigm.
- To introduce standard control structures
- To introduce students to the definition and implementation of simple classes and objects
- To develop skills for:
    - analyzing and designing object oriented solutions for small problems;
    - implementing the solutions in an object oriented language;
    - testing the solutions developed.

At the conclusion of this course, the student should:

- be able to appropriately use standard Java classes and methods;
- be able to read and understand simple Java programs;
- have achieved sound competency in using Java control structures;
- be able to design object oriented solutions for simple problems and implement them in Java;
- be able to solve simple problems using an object oriented language such as Java;
- be able to solve simple problems using arrays;
- be able to correctly manipulate standard data files, focusing on text files

Assessment

Quiz/Assignment – 40%

Exams – 60%

Study Plan

Week One	Introduction, programming languages, OO programming, some simple examples
Week Two	Strings, variables, identifiers, statements, initialization, operators and operator precedence
Week Three	Algorithms, Stepwise refinements. Decisions (if, if-else, switch)
Quiz	
Week Five	Repetitions (for loops,)
Week Six	Writing simple classes
Week Seven	Arrays, methods and parameters
Quiz	
Week Nine	Inheritance, Method overloading and overriding
Week Ten	File manipulation
Week Eleven	Introduction to Graphical User Interface

Textbook

- Deitel, P. & Deitel, H. (2017), *Java: How to program*, 11th Ed, Prentice Hall, NY
- Savitch, W. (2012), *Absolute Java*, 5th Ed, Pearson, NY.