

Al-Albays University
Faculty of Information technology
Department of CS
First Semester 2017/2018

<u>Course Syllabus</u>	
Course Title: Programming with Java	Course code: 901211
Course Level:	Course prerequisite (s) and/or corequisite (s): OOP
Lecture Time:	Credit hours: 3

Course module description and objective:

The objective of this course is to teach students object oriented programming via the Java programming language. By the end of the course, you should be familiar with:

- Java language basics like the types, operators and program control.
- Principles of object oriented programming in Java with classes, inheritance, polymorphism, interfaces, containers and design patterns.
- Exception handling. Java IO,
- Familiarity with the Graphical User Interfaces (GUIs)
- Applet programming basics.

Text book:**1. Java How To Program (Early Objects) (10th Edition)**

by Paul J. Deitel and Harvey Deitel | Mar 6, 2014

Reference book:**2. Introduction to Programming with Java: A Problem Solving Approach**

by Dean Dr, John and Ray Dean | Jan 25, 2013

<u>Allocation of Marks</u>	
Assessment Instruments	Mark
First Exam	20%
Second Exam	20%
Lab	10%
Final Exam	50%

Course/module academic calendar

Week	Basic and support material to be covered	Homework/reports and their due dates
(1)	Background, basics of O-O,	
(2)	Java Syntax Primitive Data Types and Classes: Primitive Data Types Input/output statements Procession Numerical Data Calling Methods using Dot Notation String and Math Class	

(3,4)	Simple Java Applications	
(5)	Java Applications ...	
(6)	Object Based Programming Object oriented Design Definitions of Class, Field, Method, and Constructor Instance methods versus Class methods. Argument/Parameter correspondence. Methods output. Using <i>This</i> keyword.	
(7)	Object based programming. First exam	
(8)	Control Structures: Decisions and Loops Boolean Expressions. The if statement. Multiple-Alternative Decisions. Counting loops State-Controlled Loops	
(9, 10)	Arrays and Strings Declaration Operations On Whole Arrays. Passing Arrays to Methods. Searching and Sorting arrays. Array of Objects. 2-D Arrays	
(11)	Class Hierarchies, Inheritance, and Interface <ul style="list-style-type: none"> • Class Hierarchies and Inheritance. • Operations in a Class Hierarchy. • Polymorphism. • Interfaces. • Abstract Classes. 	
(12, 13)	Class Hierarchies, Inheritance, and Interfaces.	
(14)	I/O streams Second Exam	
(15)	Exception handling	
(16)	Final Exam	

Expected workload:

On average students need to spend 2 hours of study and preparation for each 50-minute lecture/tutorial.

Attendance policy:

Absence from lectures and/or tutorials shall not exceed 15%. Students who exceed the 15% limit without a medical or emergency excuse acceptable to and approved by the Dean of the relevant college/faculty shall not be allowed to take the final examination and shall receive a mark of zero for the course. If the excuse is approved by the Dean, the student shall be considered to have withdrawn from the course.