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

Course Syllabus	
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

Allocation of Marks	
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 *This* 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 • 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.