

Course: Computer Programming - I CSC111
Academic Year: 1437/1438 (2016-2017)
Semester: Fall

Textbook

- Java: An Introduction to Problem Solving and Programming, 7ed, W. Savitch, Pearson International (Textbook)
- Java How to Program, 7ed, Deitel and Deitel, Pearson International (reference)
- Introduction to Java Programming, Comprehensive Version, 10ed Y. Daniel Liang, Prentice Hall (reference)

Plan

Week #	Topic	Course Material	Labs, Lab exams	Assignments
1	<ul style="list-style-type: none">• Introduction to computers and Java: computer basics, Java, programming basics	Chapter 1 Introduction		
2	<ul style="list-style-type: none">• Variables, Data Types, Identifiers, Assignment• Simple Input/Output	Ch 2.1 Ch 2.1	LAB-1 (Hello world, variables, assignment)	<ul style="list-style-type: none">• Assignment-1 OUT
3	<ul style="list-style-type: none">• Constants, Type Casting, Arithmetic Operators, Operator precedence• Case study: vending machine change	Ch 2.1 Ch 2.1	LAB-2 (variables, IO, expressions)	<ul style="list-style-type: none">• Assignment-1 DUE• Assignment-2 OUT
4	<ul style="list-style-type: none">• Increment and decrement, keyboard and screen I/O, documentation and Style Basic if-else statement, Boolean expressions	Ch 2.1, 2.3 Ch 3.1	EXAM-1 (simple program with variables, IO, expressions)	<ul style="list-style-type: none">• Assignment-2 DUE• Assignment-3 OUT

5	<ul style="list-style-type: none"> • Nested if-else statement, multi branch if statement • Case Study, exit Method (conditional operator not included) Comparing strings, The type Boolean 	Ch 3.1 Ch 3.1 Ch 3.1, 3.2	LAB-3 (if statement, Boolean expressions)	<ul style="list-style-type: none"> • Assignment-3 DUE • Assignment-4 OUT
6	<ul style="list-style-type: none"> • Switch statement (enumeration not included) • while statement • do-while statement • Programming example 	Ch 3.3 Ch 4.1 Ch 4.1	LAB-4 (simple loops)	<ul style="list-style-type: none"> • Assignment-4 DUE • Assignment-5 OUT
	• Mid Term Exam– I			
7	<ul style="list-style-type: none"> • for statement (for-each not included) • Nested loop • Programming with loops, loop bugs, tracing variables (break and continue, assertion not included) 	Ch 4.1 Ch 4.1 Ch 4.2	LAB-5 (Nested loops)	<ul style="list-style-type: none"> • Assignment-5 DUE • Assignment-6 OUT
8	<ul style="list-style-type: none"> • Classes: Instance variable, • UML Programming • Example Methods, void Method, Method that return a value 	Ch 5.1 Ch 5.1 Ch 5.1	EXAM-2 (conditional statement, loops)	<ul style="list-style-type: none"> • Assignment-6 DUE • Assignment-7 OUT
9	<ul style="list-style-type: none"> • The keyword this, • Local variables, blocks Parameters of a primitive type • Information hiding, public and private modifiers 	Ch 5.1 Ch 5.1 Ch 5.2	LAB-6 (Objects)	<ul style="list-style-type: none"> • Assignment-7 DUE • Assignment-8 OUT
10	<ul style="list-style-type: none"> • Accessor (getters) and mutator methods(setters) • Encapsulation, UML class diagram • Methods calling methods 	Ch 5.2 Ch 5.2	LAB-7 (objects and methods)	<ul style="list-style-type: none"> • Assignment-8 DUE • Assignment-9 OUT
11	<ul style="list-style-type: none"> • Variable of class type (references) • Defining an equals method for a class • Parameters of class type • Constructors 	Ch 5.3 Ch 5.3 Ch 6.1	LAB-8 (Information hiding, encapsulation)	<ul style="list-style-type: none"> • Assignment-9 DUE • Assignment-10 OUT
11	• Mid Term Exam– II			

12	<ul style="list-style-type: none"> • Static variables and methods • Overloading • Array basics 	Ch6.2 Ch6.4 Ch7.1	LAB-9 (Constructors, static variables & methods, overloading)	<ul style="list-style-type: none"> • Assignment-10 DUE • Assignment-11 OUT
13	<ul style="list-style-type: none"> • Array basics programming example • Arrays in classes and methods • Array of objects 	Ch7.1 Ch7.2 Ch7.3	LAB-10 (array processing)	<ul style="list-style-type: none"> • Assignment-11 DUE • Assignment-12 OUT
14	<ul style="list-style-type: none"> • Operations on array of objects (add, search, delete) 	(Instructor Notes)	LAB-11 (Array of objects)	<ul style="list-style-type: none"> • Assignment-12 DUE • Project OUT
15	<ul style="list-style-type: none"> • Revision 		Final Lab Exam (everything)	
	<ul style="list-style-type: none"> • Final Exam 			

Assessment Methods & Policy

Homework, Quizzes and Attendance	16% 12% 4%	Homework Assignments (1/H W) Class Project
Lab.	24%	3 Evaluation Exams in the Lab (6+8+10)
Written Midterm Exams	20%	10% Midterm exam 1 10% Midterm exam 2
Written final exam	40%	According to university calendar

Homework assignments:

Homework will be assigned and graded. All homework assignments will be given with a strict deadline, and students are required to submit the assignments on or before the deadline. Cheating will not be tolerated.

Quizzes

In-class quizzes will be given throughout the semester to assess the desired course outcomes.

Continuous Evaluation Exams

There will be 3 exams each one conducted during a lab session for 2 hours under supervision of the lab Instructor. Each exam will consist of a single programming problem. The student will be presented with a detailed problem statement and asked to write, compile and run a full Java program to solve the problem. The answer-program should be written using Eclipse (or any other IDE available for students in the lab). Unlike during regular lab sessions, the student should not expect any help from the lab instructor.

Midterm:

Two Midterms will be given. It will be a closed book and closed note exam and will cover the studied part of the course.

Mid Term 1: It covers: from the beginning up to the conditional statements (usually scheduled in the 6th week of the term)

Mid Term 2: It covers all studied concepts but the array structure (usually scheduled in the 11th week of the term).

Final

A comprehensive final examination will be given. It will be a closed book and closed note exam and will cover all course material.

Deadline Policy

All homework assignments will be given a strict deadline, and students are required to submit their assignments on or before the deadline. Will be collected at the start of the class on the due date, and late submissions will not be accepted. In case of extenuating circumstances, students are advised to contact the professor as soon as possible. You are encouraged to discuss the course and the assignments with each other, however, your exams and home works should be your own work

Attendance Policy

Attendance will be taken. Attendance will be graded as cited above, and may be used as a deciding factor when final average is between grades.

You will be denied final exams if they exceed 25% absence rate (including the lectures, tutorials, and labs). Excuses of absence are accepted no later than one week of the absence

Computer usage

All homework assignments or project documents should be submitted using MS-Word and/or appropriate computer software. No hand written submission will be accepted.