

King Fahd University of Petroleum & Minerals
College of Computer Sciences and Engineering
Information and Computer Science Department

ICS 102: Introduction to Computing I (2-3-3)

Syllabus – Summer Semester 2018-2019 (183)

Website: Blackboard

Class Time and Venue:

Sec.	Time	Venue	Instructor	Office Hours
01	UMTW 10:30-11:20 am	24-146	Prof. El-Sayed El-Alfy Office: 22/317 Phone: 1930 E-mail: alfy@kfupm.edu.sa	UMTW: 11:20 am – 11:50 am (Also, by appointment) Location: 22/317
02	UMTW 10:30-11:20 am	24-236A	Dr. Wasfi G. Al-Khatib Office: 22/311 Phone: 1715 E-mail: wasfi@kfupm.edu.sa	UMTW: 11:20 am – 11:50 am (Also, by appointment) Location: 22/311
01 Lab	MW 02:00-04:40 pm	22-335	Prof. El-Sayed El-Alfy Office: 22/317 Phone: 1930 E-mail: alfy@kfupm.edu.sa	UMTW: 11:20 am – 11:50 am (Also, by appointment) Location: 22/317
02 Lab	MW 02:00-04:40 pm	22-333	Dr. Wasfi G. Al-Khatib Office: 22/311 Phone: 1715 E-mail: wasfi@kfupm.edu.sa	UMTW: 11:20 am – 11:50 am (Also, by appointment) Location: 22/311

Course Catalog Description

Overview of computers and computing. Introduction to a typical programming language, such as Java. Basic data types and operators. Basic object-oriented concepts. Wrapper classes. Console input/output. Logical expressions and control structures. Memory models and methods. Arrays and strings. More object-oriented concepts.

Co-requisites: MATH 101 or MATH 132

Course Objectives

The objectives of this course are to:

1. Provide the students with the basic principles of programming
2. Develop the required problem solving skills needed in programming.

Course Learning Outcomes

Upon completion of the course, you should be able to:

1. Write programs using basic data types and strings [Student Outcome 2]
2. Design and implement programming problems using selection [Student Outcome 2]
3. Design and implement programming problems using loops [Student Outcome 2]
4. Use and implement classes as data abstractions in an object-oriented approach
5. Implement simple exception handling in programs [Student Outcome 2]
6. Develop programs with input/output from text files [Student Outcome 2]
7. Design and implement programming problems involving arrays [Student Outcome 2]

Lab Learning Outcomes

Upon completion of the lab, you should be able to:

1. Use effectively software tools and program development platforms
2. Reinforce programming concepts through practical examples
3. Enhance programming skills through problem solving and code development of small-size software applications
4. Improve self-learning, teamwork and communication skills through project development practices
5. Engage in continuing professional development under minimal guidance

Required Material

- "Absolute Java" by Walter Savitch, Addison Wesley, 6th Edition, 2016.
- Lecture and Lab Handouts.

Tentative Assessment Plan

Assessment Tool	Weight
Lab Work: Tests [2 × 5%] + Project [1 × 10%] + Homework [5 × 1%] Lab Test 1: Wednesday July 3 rd 2019 Lab Test 2: Wednesday July 24 th 2019	25%
Quizzes [5 × 2%] Quiz #1: Wednesday June 19 th 2019. Quiz #2: Wednesday June 26 th 2019. Quiz #3: Wednesday July 10 th 2019. Quiz #4: Wednesday July 17 th 2019. Quiz #5: Wednesday July 24 th 2019.	10 %
Midterm Exam (Thursday July 4 th 2019, 2:00 PM – 4:00 PM) Location: TBA	30 %
Final Exam Tuesday July 30 th 2019, 7:30AM – 9:30 AM, Location: TBA	35 %

Lecture and Lab Schedule:

Week	Lecture	Date	Topic	Book	Lab #	Lab Topic
1	1	U 9/6	Welcome and Course Overview	1.1		
	2	M 10/6	Introduction	1.1	1	Getting started with Java
	3	T 11/6	Expressions and Assignment	1.2		
	4	W 12/6	Math Class	5.1 (pg305-309)	2	Arithmetic Expressions
2	5	U 16/6	Strings	1.3		
	6	M 17/6	Screen Output and Console Input	2.1, 2.2	3	Screen Output and Console Input, HW01 posted
	7	T 18/6	ProblemSolving 1	Ch 1		
	8	W 19/6	Selection Structures Quiz01	3.1	4	Strings
3	9	U 23/6	Boolean Expressions	3.2		
	10	M 24/6	ProblemSolving 2	Ch3 (I)	5	Selection, Hw01 due, Hw02 posted
	11	T 25/6	While and do Loops	3.3		
	12	W 26/6	For loops Quiz02	3.3	6	Loops
4	13	U 30/6	File I/O	2.3,10.1,10.2		
	14	M 1/7	ProblemSolving 3	Ch3 (II)	7	More on loops and File I/O, HW02 due, HW03 posted
	15	T 2/7	ProblemSolving 4	Ch3 (II)		
	16	W 3/7	1-D Arrays	6.1		Introduction to Project, Lab Test01 [Strings, Expressions, Console I/O, Selection, Loops, File I/O] [5%] + Midterm Exam Part 1 (Programming)
Midterm Exam Part 2 (Thursday July 4th 2019, 2:00pm - 3:30 pm)						
5	17	U 7/7	1-D Arrays	6.2,6.3		
	18	M 8/7	Static Methods	5.1	8	1-D Arrays, HW03 due, HW04 posted
	19	T 9/7	Introduction to OO	4.1,4.2		
	20	W 10/7	Classes Quiz03	4.3,4.4	9	Static Methods

Week	Lecture	Date	Topic	Book	Lab #	Lab Topic
6	21	U 14/7	Classes	5.1,5.2		
	22	M 15/7	Classes	5.3	10	Classes I, HW04 due, HW05 posted
	23	T 16/7	ProblemSolving 5	4, 5		
	24	W 17/7	Array of Objects + static members Quiz04	6.2,6.3	11	Classes II
7	25	U 21/7	2D-Arrays	6.4		
	26	M 22/7	Problem Solving6	6.1-6.4	12	Arrays of Objects, HW05 due
	27	T 23/7	Useful classes in Java			
	28	W 24/7	ProblemSolving6 Quiz05		13	Lab Test02 [1D-Arrays, static methods, Classes and Array of Objects] [5%] + Final Exam Part 1 (Programming)
8	29	U 28/7	Review			
	30	M 29/7	Review			Project Due [10%]
Final Exam Part 2 (Tuesday July 30th 2019, 7:30AM - 9:00 AM)						

Course Policies

- **Labs:** Lectures and labs are integrated and they complement each other. The requirements for the lab project will be discussed in the lab.
- **Course Website & Participation:** Students are required to periodically check the course website on the Blackboard and download course material as needed. Several resources will be posted through the website as well. Keys to exams are generally discussed during class as time permits but solutions will not be posted. A common Blackboard will be used for communication and interaction, posting and submitting assignments, posting grades, posting sample exams, etc. It is expected that you get benefit of the discussion board by raising questions or answering questions put by others. Your active participation and the usefulness of the material you share with other students will be rewarded.
- **Attendance:** Regular attendance is a university requirement; hence attendance will be checked at the beginning of each lecture and lab. Late arrivals will disrupt the class session. Hence, two late attendances (more than 10 minutes) will be considered as one absence. Missing more than **6 lectures** or **three or more** unexcused labs will result in a DN grade without prior warning. To avoid being considered as absent, an official excuse must be shown no later than one week of returning to classes.
- **No makeup of quizzes or exams will be given.**

- **Re-grading policy:** If you have a complaint about any of your grades, discuss it with the instructor no later than a week of distributing the grades (except for the final). Only legitimate concerns on grading should be discussed.
- **Office Hours:** Students are encouraged to use the office hours to clarify any part of the material that is not clear; however the instructor will only provide hints if it is an assigned task but not solve it.
- **Academic honesty:** Students are expected to abide by all the university regulations on academic honesty. Cheating will be reported to the Department Chairman and will be severely penalized. Although collaboration and sharing knowledge is highly encouraged, copying others' work without proper citation, either in part or full, is considered plagiarism. Whenever in doubt, review the university guidelines or consult the instructor. Cheating in whatever form will result in an F grade.
- **Courtesy:** Students are expected to be courteous toward the instructor and their classmates throughout the duration of this course. Talking while someone else is speaking will not be tolerated. Furthermore, all cell phones must be turned off during class and exams. In addition, students are expected to be in class on time. More importantly, you are not allowed to leave the class unless it is an urgent matter. To contact your instructor, please use KFUPM email whenever possible and avoid using phone calls or written notes. When necessary to send an email through the university email system, please indicate ICS102-183 in the "Subject" field of your email, e.g. ICS102-183: Question about homework.