



Prince Sultan University
College of Computer and Info Sciences / Department of Computer Science
Term 241
1st Semester 2024/2025

COURSE SYLLABUS

Mission Statement of the Bachelor of Computer Science Program(s): Provide high-quality, computer science education to prepare top graduates through an environment that promotes innovative thinking, ethical behavior, lifelong learning, research, and service to the community.

1. **Course number and name:** CS101 Computer Programming 1
2. **Credits and contact hours:** 4 credits and 6 contact hours (Lectures: 3 Tutorials: 1 Lab: 2)
3. **Instructor's name:** Dr.Abrar Alrumayh
 - a. **Scheduled Office Hours:** Sun, Tue, and Thu 11:00 AM – 12:00 PM
 - b. **Office Location:** W305
 - c. **Email:** aalrumaih@psu.edu.sa
4. **Text book, title, author, and year**
 - a. **Primary Text:** Introduction to Java Programming: Global Edition (10th Ed.) by Y. Liang, Published by: Prentice Hall; 2014.
 - b. **Other References:** Class notes, handouts
 1. **Course Website [Optional]:**
 2. **Learning Management System:** Moodle is available at <https://lms.psu.edu.sa>
5. **Specific course information**
 - a. **Brief description of the content of the course (catalog description):** In this introductory course on computer programming – students are taught programming concepts, such as, variables and constants, control structures of sequence, selection etc., through programming in Java. They learn to write programs that use various data types, methods, arrays and files. The course is taught in a laboratory setting using hands on approach.
 - a. **Prerequisites or co-requisites:** None
 - b. **Indicate whether a required, elective, or selected elective course:** Required
6. **Specific goals of the course**
 - a. **Specific outcomes of instruction. The student will be able to:**

CLO1: **Fundamentals: (15%)** Use basic programming language features in computer programs. (Variables, various data types, naming conventions, assignment, increment/decrement operations, type casting, arithmetic operations, operator precedence, Math library.)

CLO2: **Selection: (15%)** Use selection statements in developing programs. (if statement, nested if, if-else statement, switch statement, logical operations, logical expressions.)

CLO3: **Repetition: (15%)** Use looping statements in developing programs. (while, do-while, for, nested loops, break and continue statements)

CLO4: **Methods: (20%)** Write modular java programs using methods. (void methods, parameters, method overloading, return type methods, scope of variables)

CLO5: **Arrays: (10%)** Write programs that use one-dimensional arrays. (copying arrays, passing arrays as parameters, returning arrays, searching and sorting arrays.)

CLO6: **I/O: (10%)** Write programs that perform I/O by reading/writing from/ to console and files.

CLO7: **Practical Part: (15%)** Use an IDE (e.g. NetBeans) to write, test/run and debug programs.

b. Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course.

Course LOs #	Program Learning Outcomes		
	Computer Science	Information Systems	Software Engineering
1	SO1	SO1	SO1
2	SO1	SO1	SO1
3	SO1	SO1	SO1
4	SO2	SO2	SO2
5	SO2	SO2	SO2
6	SO2	SO2	SO2
7	SO2	SO2	SO2

7. Brief list of topics to be covered

Week #	Dates	Topics (from Liang textbook)	CLO(s)	Assessments
1	25 Aug. – 31 Aug.	Chapter 1: Introduction to Computers, Programs, and Java	1	
2	1 Sep. – 7 Sep.	Introduction to Java using an IDE	7	
3	8 Sep. – 14 Sep.	Chapter 2: Input, variables, data types, naming conventions, assignment, increment, decrement operations, type casting, arithmetic operations, operator precedence	1	Assignment 1 (End of week 3) CLO 1: 1.5 pts CLO 7: 1 pts
4	15 Sep. – 21 Sep.	Chapter 2: Input, variables, data types, naming conventions, assignment, increment, decrement operations, type casting, arithmetic operations, operator precedence using IDE	7	
5, 6	22 Sept. – 05 Oct.	Chapter 3: Boolean data types, if statements, nested if, if-else statement, logical operations, switch.	2	Quiz 1 (End of week 5) CLO 1: 2.5 pts CLO 2: 1.5 pts

			CLO 7: 1 pts
7, 8	06 Oct. – 19 Oct.	Chapter 4: Math library, char data type, String data type	2 Quiz 2 (End of week 7) CLO 1: 2.5 pts CLO 2: 1.5 pts CLO 7: 1 pts
9, 10	20 Oct. – 2 Nov.	Chapter 5: Loops: for loop, while loop, do-while loop, nested loops, break, continue.	3 Assignment 2 (End of week 10) CLO 2: 1 pts CLO 3: 1.5 pts
11, 12	3 Nov. – 16 Nov.	Chapter 6: Methods, void methods, parameters, method overloading, return type methods, scope of variables	4 Major Exam (Week 11) Sun. 3 Nov. 12 – 1 PM CLO 1: 5 pts CLO 2: 5 pts CLO 3: 6 pts CLO 7: 4 pts
13	17 Nov. – 23 Nov.	Chapter 7: Arrays, copy arrays, passing arrays as parameters, returning arrays, search and sort arrays.	5 Quiz 3 (End of week 13) CLO 4: 4 pts CLO 5: 1 pts
14	24 Nov. – 30 Nov.	Chapter 7: Arrays, copy arrays, passing arrays as parameters, returning arrays, search and sort arrays.	5 Lab Exam 28 Nov. 2024 3 versions (8 AM, 10 AM, 1 PM) CLO 2: 1 pts CLO 3: 1 pts CLO 4 :3.5 pts CLO 5: 2.5 pts CLO 7: 2 pt
15	1 Dec. – 5 Dec.	Chapter 12: Exceptions, Text Files, Input/Output	6
16		Final Exam	1-6 CLO 1:2.5 pts CLO 2:4 pts CLO 3:6 pts CLO 4:12 pts CLO 5:6 pts CLO 6:9.5 pts

8. Weight of Assessments

- 1 Final Exam – 40%

- 1 Major Exam – 20%
- 3 Quizzes – 15% (5% each)
- 1 Lab Exam – 10%
- 2 Assignments – 5% (2.5% each)
- Lab works – 5% (0.5% per lab session)
(1, 1, 0.5, 0.5, 0.5, 0.5, 1) per CLO
- Attendance – 5%

9. Other Course Policies

Plagiarism and Academic Dishonesty: “Plagiarism can be defined as unintentionally or deliberately using another person’s writing or ideas as though they are one’s own. Plagiarism includes, but is not limited to, copying another individual’s work and taking credit for it, paraphrasing information from a source without proper documentation, and mixing one’s own words with those of another author without attribution. In addition, buying a paper or project, or downloading a paper from the Internet, and submitting them as your own are also plagiarism. The penalty for academic dishonesty will bring course expulsion and failure, or even suspension” (Academic Integrity and Syllabus Acknowledgement Form).

Attendance Policies: The University attendance policy will be strictly followed. Students are expected to attend all class sessions and be in class on time. **Students who regularly attend classes will be more proficient in using the JAVA IDE to write, test, run, and debug programs compared to those who are frequently absent.** Missing a class session is a student’s responsibility. Missed classes will not be repeated. A total of **23** absences will lead to a denial grade **DN**. **In order to emphasize the importance of attendance, five marks are allocated for class participation and attendance in order to reduce the absenteeism rate. In this course, one mark is deducted for every four absences.** It is the student’s responsibility to, periodically, check course website/Moodle for course content, projects assignments, updates and notifications. Any Student entering the class **10** minutes after the starting time will be marked “late”. Three hours late add up to one absent hour.

Major Exam Policies: The university rules for exams will be followed. There will be no repeat exams – a student staying absent in a major exam or a quiz will result in zero marks.