



Course Specification

(Bachelor)

Course Title: Computer Programming (1)

Course Code: APCS1202

Program: Programming and Computer Science Program

Department: Diploma

College: Applied College

Institution: Umm Al-Qura University

Version: 1

Last Revision Date: Jan -2025



Table of Contents

A. General information about the course:	3
B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods.....	4
C. Course Content	5
D. Students Assessment Activities.....	6
E. Learning Resources and Facilities	6
F. Assessment of Course Quality.....	6
G. Specification Approval.....	7





A. General information about the course:

1. Course Identification

1. Credit hours: (4 hours)

2. Course type

- A. ☐ University ☐ College ☒ Department ☐ Track ☐ Others
- B. ☒ Required ☐ Elective

3. Level/year at which this course is offered: (1st level –1st year)

4. Course General Description

This course will provide:

- general problem-solving concepts.
- introduction to programming and programming languages.
- basics of computer programming techniques (variables , input and output, control statements, loops, arrays, methods).

5. Pre-requirements for this course (if any):

N.A.

6. Co-requisites for this course (if any):

N.A.

7. Course Main Objective(s):

The main objective of this course is to provide students with introduction of problem solving and basics of computer programming concepts.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	5	100%
2	E-learning		
3	Hybrid <ul style="list-style-type: none"> • Traditional classroom • E-learning 		
4	Distance learning		



3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	3 * 15 = 45
2.	Laboratory/Studio	2 * 15 = 30
3.	Field	
4.	Tutorial	
5.	Others (specify)	
Total		75

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Classify different types of problem-solving techniques.	K1, K3	-Lectures - Lab demonstrations	<ul style="list-style-type: none">▪ Written exam▪ Homework assignments▪ Lab assignments▪ Class Activities▪ Quizzes
1.2	Learn fundamental concepts about programming.	K1, K3		
1.3	Recognize different types of variables, control statements, loops, arrays, and methods.	K3		
2.0	Skills			
2.1	Apply problem-solving techniques such as (Flowchart- pseudo code) to analyze different programming problems.	S2	<ul style="list-style-type: none">▪ Lectures.▪ Lab projects.▪ Case studies▪ Individual presentations.▪ Brainstorming	<ul style="list-style-type: none">▪ Written exam▪ Homework assignments▪ Lab assignments.▪ Class Activities▪ Quizzes▪ Practical Exam.
2.2	Apply computer science theory and software development fundamentals to produce basic computer-based solutions.	S2		
2.3	Design and code small sized software solutions using	S2		

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
	programming language concepts, such as selection statements, loops, arrays and methods.			
3.0	Values, autonomy, and responsibility			
3.1	Manage self-learning by collecting and classifying information on a specific topic.	V2	<ul style="list-style-type: none"> Small group discussions. Whole group discussions. Brainstorming. Presentations. Case study. 	<ul style="list-style-type: none"> Practical Exam. Lab assignments. Class Activities. Quizzes.
3.2	Demonstrate commitment to academic values, standards, and ethical code of conduct, and represent responsible citizenship.	V1		

C. Course Content

No	List of Topics	Contact Hours	
		Theoretical	Practical
1.	Course enrollment including course aims, topics, contents, textbook, references, lecturer acquaintance, office hours, methods of assessment and due dates.	2	0
2.	Introduction to problem-solving concepts: <ul style="list-style-type: none"> Steps of problem- solving. Develop solution using Algorithms. Develop solution using Flowcharts and Pseudocode. 	6	4
3.	Introduction to computer programming languages: <ul style="list-style-type: none"> History and discuss each programming generation. Installation and advantages. 	3	2
4.	Data types and variable declaration.	3	2
5.	Operators (arithmetic, logic and assignment) and expressions.	3	2
6.	Input and output functions.	3	2
7.	Problem solving with control statements (IF, switch)	6	4
8.	Problem solving with loops (while, do-while , for)	6	4
9.	Arrays: <ul style="list-style-type: none"> Types of arrays. Array declaration. 	6	4
10.	Methods:	6	4





	<ul style="list-style-type: none"> Types of methods. Methods declaration. Methods calling. 		
Total			

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Quizzes & Assignment	Throughout the term	10 %
2.	Midterm Exam	8	20 %
3.	Practical skills	Throughout the term	20 %
4.	Final Exam	16 - 17	50 % (40% Theoretical Exam , 10% Practical Exam)

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Introduction to Java Programming and Data Structures, Comprehensive Version 12th Edition
Supportive References	Course notes on the E-learning web-site
Electronic Materials	Core Java(TM), Volume I—Fundamentals by Cay S. Horstmann
Other Learning Materials	Instructor handouts and presentation in ppt.

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	<ul style="list-style-type: none"> Classroom well equipped with at least 40 adequate seats. Laboratory well equipped with at least 20 adequate seats. Internet connection
Technology equipment (projector, smart board, software)	<ul style="list-style-type: none"> Smart board Data show IDE software for Programming language
Other equipment (depending on the nature of the specialty)	<ul style="list-style-type: none"> Internet inside the classroom. Library: Up to date scientific books, in the library.

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Questionnaire of course quality





Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of Students assessment	Peer reviewers	-Random grading report -Test Completion report for test standards
Quality of learning resources	Students	E-Survey of sufficiency of learning resource
The extent to which CLOs have been achieved	Instructor, program leaders and Course coordinator	Questioner of course quality
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify))

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	Umm Al-Qura University Council
REFERENCE NO.	851141114462/190365
DATE	1446/11/22

