Course Specifications

Course Title:	Computer Programming-1
Course Code:	501220-3
Program:	**Bachelor in Information Technology**
Department:	Department of Computer Science
College:	College of Computers and Information Technologies
Institution:	Taif University

Table of Contents

A. Course Identification

1. Credit hours:	
2. Course type	
a. University ☐ College ☐ Department **X** Others ☐	
b. Required **X** Elective ☐	
3. Level/year at which this course is offered:	
4. Pre-requisites for this course (if any)**: None**	
5. Co-requisites for this course (if any)**: None**	

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	4	50%
2	**Blended**	0	0
3	**E-learning - (Programming Tutorials)**	1	12.5%
4	**Distance learning**	0	0
5	**Other**	3	37.5%

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	40
2	**Laboratory/Studio**	30
3	**Tutorial**	10
4	**Others** (specify)	
	Total	80

B. Course Objectives and Learning Outcomes

1. Course Description

Introduce the fundamental concepts of programming and problem-solving techniques. Topics include data types, control structures, arrays and the mechanics of running, testing, and debugging.

2. Course Main Objective

Students at the end of this course are able to:
- Develop problem solving and algorithm development skills
- Develop understanding of fundamental concepts in computer programming
- Develop skills to write programs using control structures and loops

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding**	
1.1	Explain the basic terminology used in computer programming	K1
1...		
2	**Skills :**	
2.1	Write, compile and debug programs written in C++ language	S1
2.2	Use different data types in a computer program	S1
2.3	Design programs involving decision structures and loops	S2
2...		
3	**Values:**	
3.1		
3...		

C. Course Content

No	List of Topics	Contact Hours
1	Overview of Computers and Programming Languages	5
2	Introduce basic components of a C++ program, including special symbols, and identifiers	10
3	Explore simple data types	5
4	Introduce arithmetic operators and examine how a program evaluates arithmetic expressions	10
5	Introduce input and output statements	10
6	Write complete C++ programs that use the introduced topics	10
7	Control Structures 1 : Decisions	10
8	Control Structures 2 : Loops	10
9	Arrays and Strings	10
Total		**80**

D. Teaching and Assessment
1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge and Understanding**		
1.1	Understand the basic terminology used in computer programming	Lectures Labs Project	**Direct Assessment Tool** Quizzes / Homework/Project/ Exams **Indirect Assessment Tool** Course Exit Survey
2.0	**Skills**		
2.1	Write, compile and debug programs written in C++ language	Lectures Labs	**Direct Assessment Tool**

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
			Quizzes / Homework/ Exams **Indirect Assessment Tool** Course Exit Survey
2.2	Use different data types in a computer program	Lectures Labs	**Direct Assessment Tool** Quizzes / Homework/ Exams **Indirect Assessment Tool** Course Exit Survey
2.3	Design programs involving decision structures and loops	Lectures Labs	**Direct Assessment Tool** Quizzes / Homework/ Exams **Indirect Assessment Tool** Course Exit Survey
3.0	**Values**		
3.1			
3.2			
…			

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	HomeWorks/StudentParticipation-Attendance	Every Week	10%
2	Quizzes	Week 4 & 8	10%
3	Final Labs Exam	Week 11	10%
4	Mid-Term	Week 6	20%
5	Final Examination	Week 12	50%
6			

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

Appropriate student advising is provided to support the student during the whole semester. It helps the student to build a close relationship with his/her advisor and to provide student motivation and involvement with the institution.

Additional counseling is provided by course directors, who provide students with academic reinforcement and assistance and refer "at risk" students to the Vice Dean for Academic Affairs and the Vice Dean for female section. Some methods to implement advising is by:

- Consultation by appointment (as needed)
- Through emails
- Through BlackBoard Learn

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	C++ Programming: From Problem Analysis to Program, D S Malik, CEGAGE Learning, 2011
Essential References Materials	C++ how to Program, Harvey M. Deitel and Paul J. Deitel, Prentice Hall, 2008
Electronic Materials	
Other Learning Materials	

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	• Classroom with 20-30 chairs Lab with 15 PCs and required software tools installed (Dev c++)
Technology Resources (AV, data show, Smart Board, software, etc.)	• Video projector / data show/White board
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of teaching	• Students • Faculty members • Coordinator • Council • Curriculum Committees	• Course exit survey • Feedback from Faculty members • Feedback from Course Coordinator • Feedback from council • Feedback from Curriculum Committees

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of assessment	- Students - Faculty members - Coordinator - Council - Curriculum Committees	- Course exit survey - Feedback from Faculty members - Feedback from Course Coordinator - Feedback from council - Feedback from Curriculum Committees
Extent of course achievement	- Students - Faculty members - Coordinator - Council - Curriculum Committees	- Course exit survey - Feedback from Faculty members - Feedback from Course Coordinator - Feedback from council - Feedback from Curriculum Committees
Extent of course learning outcomes	- Students - Faculty members - Coordinator - Council - Curriculum Committees	- Course exit survey - Feedback from Faculty members - Feedback from Course Coordinator - Feedback from council - Feedback from Curriculum Committees
Quality oflearning resources	- Students - Faculty members - Coordinator - Council - Curriculum Committees	- Course exit survey - Feedback from Faculty members - Feedback from Course Coordinator - Feedback from council - Feedback from Curriculum Committees

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	IT Department Council/ Executive program committee

Course Specifications

Reference No.	11
Date	23/10/21443