



Course Specification

— (Bachelor)

Course Title: **Programming Paradigms**

Course Code: **501427-3**

Program: **Bachelor of Computer Science**

Department: **Department of Computer Science**

College: **College of Computers and Information Technology**

Institution: **Taif University**

Version: **1**

Last Revision Date: **01-02-2024**



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A. General information about the course:

1. Course Identification

1. Credit hours: (3)

2. Course type

A. University College Department Track Others
 B. Required Elective

3. Level/year at which this course is offered: (8th Level)

4. Course general Description:

The course introduces a survey of programming language concepts and design principles of procedural, object-oriented programming, functional and logic programming paradigms. Topics include history of programming languages, data types, control structures and run-time management of dynamic structures

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

Object Oriented Programming (501323-3)

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

7. Course Main Objective(s):

In this course, student understand the strengths and limitations of languages used already, learning new languages and evaluate the suitability of languages for a given task. student view, consider, analyze, design, plan, work, and solve problems from a computational perspective.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	3	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	45
2.	Laboratory/Studio	
3.	Field	-
4.	Tutorial	-
5.	Others (specify)	-
Total		45

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

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Understand syntax, semantics, names, scopes and bindings.	K1	Lectures	Direct Quizzes / Homework Exams Indirect Course Exit Survey
2.0	Skills			
2.1	Analyze control flow structures, typing and scoping.	S1	Lectures	Direct Quizzes / Homework Exams Indirect Course Exit Survey
2.2	Explain the language features and paradigms of different programming languages.	S2	Lectures	Direct Quizzes / Homework Exams



Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
				Indirect Course Exit Survey
2.3	Determine an appropriate programming language for given applications.	S2	Lectures	Direct Quizzes / Homework Exams Indirect Course Exit Survey
3.0	Values, autonomy, and responsibility			
3.1				
3.2				

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction	3
2.	Evolution of the Major Programming Languages	3
3.	Names, Binding, Type, Checking and Scoping	4
4.	Data types	4
5.	Expressions and Assignment Statements	3
6.	Statement level control Structures	3
7.	Subprograms	4
8.	Implementing subprograms	4
9.	Abstract data types and encapsulation constructs	6
10.	Object oriented languages	6
11.	Logic programming	5
Total		45





D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Homework/ Student Participation-Attendance	Every Week	10%
2.	Quizzes	Week 4, 7 and 12	10%
3.	Mid-Term	Week 8	30%
4.	Final Examination	Week 16	50%

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

E. Learning Resources and Facilities

1. References and Learning Resources

Required Textbooks	Sebesta, Robert W. Concepts of programming languages. Boston: Pearson,, 2012.
Essential References	
Supportive References	
Electronic Materials	
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	<ul style="list-style-type: none"> Classroom with 30 chairs
Technology Resources (AV, data show, Smart Board, software, etc.)	<ul style="list-style-type: none"> Video projector / data show White board
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	<ul style="list-style-type: none"> Students Faculty members Coordinator Council 	<ul style="list-style-type: none"> Course exit survey Feedback from Faculty members Feedback from Course





Assessment Areas/Issues	Assessor	Assessment Methods
	<ul style="list-style-type: none"> Curriculum Committees 	<ul style="list-style-type: none"> Coordinator Feedback from council Feedback from Curriculum Committees
Effectiveness of Students assessment	<ul style="list-style-type: none"> Students Faculty members Coordinator Council Curriculum Committees 	<ul style="list-style-type: none"> Course exit survey Feedback from Faculty members Feedback from Course Coordinator Feedback from council Feedback from Curriculum Committees
Quality of learning resources	<ul style="list-style-type: none"> Students Faculty members Coordinator Council Curriculum Committees 	<ul style="list-style-type: none"> Course exit survey Feedback from Faculty members Feedback from Course Coordinator Feedback from council Feedback from Curriculum Committees
The extent to which CLOs have been achieved	<ul style="list-style-type: none"> Students Faculty members Coordinator Council Curriculum Committees 	<ul style="list-style-type: none"> Course exit survey Feedback from Faculty members Feedback from Course Coordinator Feedback from council Feedback from Curriculum Committees
Other		

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

Assessment Methods(Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	CS council
REFERENCE NO.	Meeting #11
DATE	07/03/2024

