اعتماد
NCAAA

T4

2020

Course Specifications

Course Title:	Programming Paradigms
Course Code:	**501427-3**
Program:	**Bachelor in Computer Science**
Department:	**Department of Computer Science**
College:	**College of Computers and Information Technologies**
Institution:	**Taif University**

Table of Contents

A. Course Identification

1. **Credit hours:** 3

2. Course type

a.	University ☐	College ☐	Department **x**	Others ☐
b.		Required **x**	Elective ☐	

3. Level/year at which this course is offered: 12th Level/4

4. Pre-requisites for this course (if any)**: 501323-3**

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	100%
2	Blended		
3	E-learning		
4	Correspondence		
5	Other		

7. Contact Hours

No	Activity	Learning Hours
1	Lecture	40
2	Laboratory/Studio	
3	Tutorial	
4	Others (specify)	
	Total	40

B. Course Objectives and Learning Outcomes

1. Course 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

2. Course Main Objective

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.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and Understanding:**	
1.1	Understand syntax, semantics, names, scopes and bindings.	K1
2	**Skills:**	
2.1	Analyze control flow structures, typing and scoping.	S1
2.2	Explain the language features and paradigms of different programming languages.	S2
2.3	Determine an appropriate programming language for given applications.	S2
3	**Values:**	

C. Course Content

No	List of Topics	Contact Hours
1	Introduction	2
2	Evolution of the Major Programming Languages	2
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	4
10	Object oriented languages	5
11	Logic programming	5
Total		40

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**		
1.1	Understand syntax, semantics, names, scopes and bindings.	Lectures	**Direct** Quizzes / Homework Exams **Indirect** Course Exit Survey
2.0	**Skills**		
2.1	Analyze control flow structures, typing and scoping.	Lectures	**Direct** Quizzes / Homework Exams **Indirect** Course Exit Survey

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
2.2	Explain the language features and paradigms of different programming languages.	Lectures	**Direct** Quizzes / Homework Exams **Indirect** Course Exit Survey
2.3	Determine an appropriate programming language for given applications.	Lectures	**Direct** Quizzes / Homework Exams **Indirect** Course Exit Survey
3.0	**Values**		

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Homework / Student Participation-Attendance	Every Week	15%
2	Quizzes	Week 3, 7, 9	15%
3	Mid-Term	Week 6	20%
4	Final Examination	Week 12	50%

*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:

- 6 hours per week in pre-determined office hours
- Consultation by appointment (as needed)
- Through emails
- Through BlackBoard Learn

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	Concepts of programming languages by Robert W. Sebesta, Pearson; 10th edition (Jan. 6, 2012). ISBN-10: 0131395319
Essential References Materials	
Electronic Materials	
Other Learning Materials	

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	• Classroom with 30 chairs
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	• Course survey
Effectiveness of assessment	• Students	• Course survey
Extent of course learning outcomes	• Faculty members	• Direct Method CLOs assessment
Quality of learning resources	• Students • Faculty members	• Course survey Feedback from Faculty members

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	CS council
Reference No.	Meeting #12
Date	23-10-1443