Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2024

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: University of wasit

Faculty/Institute: computer science and information technology

Scientific Department: software department

Academic or Professional Program Name:

Final Certificate Name: Bachelor of Software Sciences

Academic System: Course system

Description Preparation Date: 2025/5/22

File Completion Date: 2025/5/29

Signature:

Head of Department Name:

Date:

احمد رعد عبد الحسين
رئيس قسم البرامجيات
30/5/2024

Signature: Ahm

Scientific Associate Name:

Dr. Ahmad Shaker Abdalrada
Assistant of Dean for Scientific Affairs

Date:
30/05/2024

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

weam mahde

Date: 24/3/2024

Signature:

Approval of the Dean

Asst. Prof. Dr
Saif Ali Alsaidi
Dean college of computer
scenic & information technology
30.05.2024

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Course Description

1Course Name
Fudamemtals of Programmig 2

2. Course Code
Soft-112

3. Semester/year
Bologna /Second Semester 2023-2024

4. The history of preparation of this description
9/2/2024

5. Available attendance forms
Classrooms

6. Number of credit hours (total) / number of units (total)
The number of hours (60)/ Number of units (4)

7. The name of the course administrator (if more than one name is mentioned)
Thaer Faraj Ali

Course Objectives
Increasing the student's mental abilities in the field of logical thinking and analysis   **Planning to solve complex problems and breaking them down into small problems that are simplified to solve ·**   - Developing the student's mindset mentally to understand programming object objects

TEACHING AND LEARNING STRATEGIES	
- The first strategy is to show how to identify the problem in the outside world and transfer it to digital reality **Urging the student to participate daily and develop the self ability to engage in discussions and solutions to daily examinations that address certain points, including knowledge of the level of understanding, linking the elements of the material presented in daily lectures, as well as evaluating listening, follow-up, talking and reading of the approved sources of the material.** **The adoption of modern methods in the presentation of the material and put forward in a way that makes it easier for the student to refer to the sequential titles in the introduction of the material is one of the most important strategies followed in the delivery of the material.**	OF THE STRATEGY

10. Course Structure					
Valuation Method	Learning Method	Unit or Topic Name	Intended Learning Outcomes	Hours	Week
Questions!	**Lectures**	**Programming basics 2**	Loop (while, do-while)	4	**1**
questions	**Lectures**	**Programming basics 2**	Conditional for Break and Continue	4	**2**
questions	**Lectures**	**Programming basics 2**	Data Structures	4	**3**

questions	**Lectures**	**Program ming basics 2**	Array	4	**4**
Exam 1st Month				4	WEEK 5
questions	**Lectures**	**Program ming basics 2**	Structures	4	**6**
questions	**Lectures**	**Program ming basics 2**	Functions	4	**7**
questions	**Lectures**	**Program ming basics 2**	Passing values to Function	4	**8**
questions	**Lectures**	**Program ming basics 2**	Overloading	4	**9**
Exam Second month				**4**	Week 10
questions	**Lectures**	**Program ming basics 2**	Recursion	4	**11**
questions	**Lectures**	**Program ming basics 2**	Class	4	**12**
questions	**Lectures**	**Program ming basics 2**	pointer	4	**13**
questions	**Lectures**	**Program ming basics 2**	Constructors	4	**14**
questions	**Lectures**	**Program ming basics 2**	Files, Exceptions	4	**15**

Course Evaluation

- **Homework and participation in daily preparation.**

- **Giving the grade to students for some of the questions asked in the lecture.**

- **Monthly exams**

12. Teaching and Learning Resources

1. Complete guide to learn C+ + Book
   2. **C+ + Language Tutorial Book**

Course Description

1- Course Name
Discrete Structures 2
2-CourseCode
Soft-125
3-semester/ year
Semester II 2023-2024
4-The history of preparation of this description
2024-2-1
5-Available forms of attendance
Classrooms
6. Number of credit hours (total) / number of units (total)
The number of hours (45)/ Number of units (3)
7. The name of the course administrator (if more than one name is mentioned)
Eng. Zain Al-Abidin Abbas Nasser
8. Course Objectives
1–The student should be able to distinguish logical phrases and how to perform logical operations on them
2–The student should get to know the groups, relationships and processes
3–The need to identify the matrix, its type and operations on it

TEACHING AND LEARNING STRATEGIES	
✓ **Active Learning: Encourage students to actively apply their knowledge through exercises, lab work, and classroom issues. The more they interact with the material, the better they understand it1.** **Collaboration: Consider allowing students to collaborate, but set clear boundaries. Equal collaboration can enhance understanding and encourage peer-to-peer discussion1.**	OF THE STRATEGY

10. Course Structure

Valuation Method	Learning Method	Unit or Topic Name	Intended Learning Outcomes	Hours	Week
Questions and Discussion	**Lectures**	**Intermittent structures**	**Logic and propositional calculus**	**3**	First Week
Questions and Discussion	**Lectures**	**Intermittent structures**	**Tautologies and contradictions**	**3**	The second week
Questions and Discussion	**Lectures**	**Intermittent structures**	**Logicalequivalence**	**3**	Week 3
Questions and Discussion	**Lectures**	**Intermittent structures**	**arguments**	3	The fourth week
Monthly exam(1)				**3**	Fifteenth
Questions and Discussion	**Lectures**	**Intermittent structures**	**Relations**	**3**	Week 6
Questions and Discussion	**Lectures**	**Intermittent structures**	**Types of relations**	**3**	WEEK 8

Questions and Discussion	Lectures	Intermittent structures	Compositions of relations	3	Week 9
Monthly exam(2)				**3**	**Week 10**
Questions and Discussion	Lectures	Intermittent structures	**Equivalence relations**	3	Week 11
Questions and Discussion	Lectures	Intermittent structures	**Matrices and vectors**	3	Week 12
Questions and Discussion	Lectures	Intermittent structures	Types of **Matrices**	3	Week 13
Questions and Discussion	Lectures	Intermittent structures	**Graphs**	3	Week 14
Questions and Discussion	Lectures	Intermittent structures	**Types of Graphs**	3	Week 15

Course Evaluation

- **Homework and participation in daily preparation.**

- **Awarding the degree to students for some of the questions that are asked in the lecture and of a cognitive nature.**

- **Monthly exams**

12. Teaching and Learning Resources

- ✓ **Faleh Omran Al-Dosari, Group Theory, Umm Al-Qura University,2-2011**

- ✓ **Adel Soran et al., Contemporary Mathematics (Theory . Collections) , Foundation for Printing and Publishing, Beirut , 1971**

- ✓ **Adel Ghassan Naoum - Basil Al-Hashimi , Introduction to Foundations of Mathematics 2, Mathematics, University of Baghdad , 2000**

Course Description

1- Course Name
Mathematics 2
2-CourseCode
Soft-124
3-semester/ year
Semester II 2023-2024
4-The history of preparation of this description
21/4/2024
5-Available forms of attendance
6. Number of credit hours (total) / number of units (total)
The number of hours (40)/ Number of units (3)
7. The name of the course administrator (if more than one name is mentioned)

Eng.Ahmed Mohammed Adkhil

8. Course Objectives

This course examines the mathematical elements of computer science. Topics include proposed logic. predicate logic; mathematical

Logic; proof techniques; mathematical deduction; set theory; number theory; matrices. Sequences and Combinations; Functions, Relationships and Their Characteristics, Elementary Graph Theory, and the Tree

TEACHING AND LEARNING STRATEGIES

• The main strategy to be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classroom and interactive tutorials and by looking at the types of simple experiences that include some interesting sampling activities for students	OF THE STRATEGY

10. Course Structure

Valuation Method	Learning Method	Unit or Topic Name	Intended Learning Outcomes	Hours	Week
		Solution of non-linear equations, Newton Raphson method for .		3hours	First Week
		Numerical differentiation and numerical integration, The Solutions of Integral equations, Trapezoidal methodSimpsons method		3hours	The second week
		Simpsons method(3/8)		3hours	Week 3
		Fourier series for odd and even functions ,Half range Fourier sin andcosine series		3hours	The fourth week
Exam Month 1				2	
		Change of interval		3hours	Week 6
		Formation of Partial differential equations		3hours	WEEK 8
		Types of partial differential equations,wave equation,heat equation		3hours	Week 9
Exam Month 2				2	
		Numerical differentiation, Euler method, modified Euler method		3hours	Week 11
		Rung Kutta method, Rung Kutta-merson method		3hours	Week 12
		Numerical analysis,Elimination and iterative methods		3hours	Week 13

		Cramer's rule, solve by inverse matrices		3hours	Week 14
		examination		2	Week 15

Course Evaluation

12. Teaching and Learning Resources
Thomas Calculus', XII, George B. Thomas Jr., Maurice D. Weir, Joel R. Haas, 2009 Differential Equations (Schumm Outline Series).   **Thomas Calculus", 12thED,George B. Thomas Jr., Maurice D. Weir, Joel R. Hass, 2009Differential Equations (Schaum's Outlin Series).**

Course Description

1- Course Name
Logical Design 2
2-CourseCode
Soft-123
3-semester/ year
Semester II 2023-2024
4-The history of preparation of this description
1/2/2024
5-Available forms of attendance
Lectures + Lab
6. Number of credit hours (total) / number of units (total)
The number of hours (56)/ Number of units (4)
7. The name of the course administrator (if more than one name is mentioned)
Eng. Hussein Ali Matar
8. Course Objectives
1-The student should understand encoder, decoder and multiplexers   The student should understand flip-flopsand how to use them.   3-The student should understand synchronization and counters   4-The student should understand ROM and PLA.
TEACHING AND LEARNING STRATEGIES

					OF THE STRATEGY
Explaining the scientific material on the blackboard and on the projector Encouraging students to participate in solving problems and explaining on the board Allocating a percentage of the grade to group activities Assigning the student to some group tasks and activities Applying scientific material in the laboratory by implementing simulation programs.					

10. Course Structure

Valuation Method	Learning Method	Unit or Topic Name	Intended Learning Outcomes	Hours	Week
		Synchronous logic gates	Synchronous logic gates	4	First Week
		Adder and subtractor circuits	Adder and subtractor circuits	4	The second week
		Comparator circuits	Comparator circuits	4	Week 3
		Encoders	Encoders	4	The fourth week
Exam Month 1				4	WEEK 5
		Multiplexers	Multiplexers	4	Week 6
		SR flip flop and j k flip flop	SR flip flop and j k flip flop	4	WEEK 8
		T flip flop and D flip flop	T flip flop and D flip flop	4	Week 9
Exam month 2				4	Week 10
		Registers design	Registers design	4	Week 11
		Counters design	Counters design	4	Week 12
		ROM*	ROM	4	Week 13
		PLA	PLA	4	Week 14
		Review all topics	Review all topics	4	Week 15

Course Evaluation

Participate in daily duties
Providing activities
Daily exams and monthly exams

12. Teaching and Learning Resources

Participate in daily duties
Providing activities
Daily exams and monthly exams

Course Description

1- Course Name
Computer organization 2

2-CourseCode
Soft-121

3-semester/ year
Semester II 2023-2024

4-The history of preparation of this description
2024-2-1

5-Available forms of attendance
Classrooms with labs

6. Number of credit hours (total) / number of units (total)
The number of hours (60)/ Number of units (4)

7. The name of the course administrator (if more than one name is mentioned)
Mr. Ahmed Hafez Abahim

8. Course Objectives

1- Identify the basics of computers in terms of hardware and software components.
2- Identify operating systems, their types and programming languages.
3- Recognize and implement Microsoft applications in laboratories.

TEACHING AND LEARNING STRATEGIES

• Interactive learning • Developed Lecture • Practical applications in selections	OF THE STRATEGY

10. Course Structure

Valuation Method	Learning Method	Unit or Topic Name	Intended Learning Outcomes	Hours	Week
Questions and Discussion	Lectures - Lab	Computer support organization	Explanation of languages of software applications chrome OS, Linux	4	First Week
Questions and Discussion	Lectures - Labs	Computer support organization	Viruses and ways to prevent them	4	The second week
Questions and Discussion	Lectures - Labs	Computer support organization	Electronic hacking in computers	4	Week 3
Questions and Discussion	Lectures - Labs	Computer support organization	Learn Excel	4	The fourth week
Exam Month 1				4	WEEK 5
Questions and Discussion	Lectures - Labs	Computer support	Learning to perform and process	4	Week 6

			organization	arithmetic numbers		
Questions and Discussion	Lectures - Labs	Computer support organization	Component of Immobilizer	4	Week 7
Questions and Discussion	Lectures - Labs	Computer support organization	Learn PowerPoint	4	WEEK 8
Questions and Discussion	Lectures - Labs	Computer support organization	Methods of slideshows in the program	4	Week 9
Exam Month 2				4	Week 10
Questions and Discussion	Lectures - Labs	Computer support organization	Components of the main window and ways to add drawings and shapes in the program	4	Week 11
Questions and Discussion	Lectures - Labs	Computer support organization	Means of saving in PowerPoint	4	Week 12
Questions and Discussion	Lectures - Labs	Computer support organization	How to add articles and display them and the writing mechanism	4	Week 13
Questions and Discussion	Lectures - Labs	Computer support organization	Networks and their types	4	Week 14
Questions and Discussion	Lectures - Labs	Computer support organization	Comprehensive review of all Microsoft applications	4	Week 15

Course Evaluation

1- Daily assignments and participations and answering some questions in the lecture.
2- Daily and monthly exams.

12. Teaching and Learning Resources

1- The basics of computer learning.
2- Computer Skills

Course Description Form

1- Course Name
English Language1
2-CourseCode
WUO2
3-semester/ year
Semester II 2023-2024
4-The history of preparation of this description
April 18, 2024
5-Available forms of attendance
Attendance

6. Number of credit hours (total) / number of units (total)
The number of hours (30)/ Number of units (2)

7. The name of the course administrator (if more than one name is mentioned)
Haider Akab Alwan

8. Course Objectives
This course for first-year students focuses primarily on reading and writing essays and how to begin writing and analyze any paragraphs into the main idea and supporting details. Dozens of useful new vocabulary will be on the first page of each chapter, and finally a range of grammar rules will also be covered in this course.

TEACHING AND LEARNING STRATEGIES	
Developing the student's skills in the field of expressive reading and writing and how to formulate the question in English	OF THE STRATEGY

10. Course Structure

Valuation Method	Learning Method	Unit or Topic Name	Intended Learning Outcomes	Hours	Week
Editorial tests	Data Show	Chapter One: Times in English	How to get to know people	2	First Week
==	==	Identification of the person	Social expression	2	The second week
==	==	Listening and Speaking	Communication between humans and the way of communication between animals	2	Week 3
==	==	Chapter Two The Way We Live	Acquisition Tools	2	The fourth week
Month 1 exam				2	WEEK 5
==	==	THE DAILY ROUTINE OF THE	Tie-in Tools	2	Week 6
==	==	How the dialogue works	Listening and Speaking	2	WEEK 8
==	==	Chapter Three :Everything Went Wrong	past	2	Week 9
Month 1 exam				2	Week 10
==	==	Past Continuous	Express time	2	Week 11
==	==	Vocabulary and ways of pronunciation	Read a story by Sherlock Holmes	2	Week 12
==	==	Chapter Four	The counted and the none are counted	2	Week 13

==	==	Listening and new vocabulary	Skills for finding grammatical errors	2	Week 14
==	==	Chapter Five : What do you want to do	Verb Forms	2	Week 15

Course Evaluation
The annual pursuit of the course is 50 degrees distributed in the form of two monthly exams 10 degrees for each exam deciding 10 degrees and the mid-year exam of 10 degrees and class participation 10 degrees . The final exam is of 50 marks .
12. Teaching and Learning Resources
Headway- Pre intermediate level Skill for success – Reading and writing