

**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:** .....

**Faculty/Institute:** .....

**Scientific Department:** .....

**Academic or Professional Program Name:** .....

**Final Certificate Name:** .....

**Academic System:** .....

**Description Preparation Date:**

**File Completion Date:**

**Signature:**

**Head of Department Name:**

**Date:**

**Signature:**

**Scientific Associate Name:**

**Date:**

**The file is checked by:**

**Department of Quality Assurance and University Performance**

**Director of the Quality Assurance and University Performance Department:**

**Date:**

**Signature:**

**Approval of the Dean**

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### 1. Program Vision

Program vision is written here as stated in the university's catalogue and website.

### 2. Program Mission

Program mission is written here as stated in the university's catalogue and website.

### 3. Program Objectives

General statements describing what the program or institution intends to achieve.

### 4. Program Accreditation

Does the program have program accreditation? And from which agency?

### 5. Other external influences

Is there a sponsor for the program?

### 6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements				
College Requirements				

<b>Department Requirements</b>				
<b>Summer Training</b>				
<b>Other</b>				

\* This can include notes whether the course is basic or optional.

<b>7. Program Description</b>				
Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	practical

<b>8. Expected learning outcomes of the program</b>	
<b>Knowledge</b>	
Learning Outcomes 1	Learning Outcomes Statement 1
<b>Skills</b>	
Learning Outcomes 2	Learning Outcomes Statement 2
Learning Outcomes 3	Learning Outcomes Statement 3
<b>Ethics</b>	
Learning Outcomes 4	Learning Outcomes Statement 4
Learning Outcomes 5	Learning Outcomes Statement 5

<b>9. Teaching and Learning Strategies</b>
Teaching and learning strategies and methods adopted in the implementation of the program in general.

<b>10. Evaluation methods</b>
Implemented at all stages of the program in general.

## 11. Faculty

### Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer

### Professional Development

#### Mentoring new faculty members

Briefly describes the process used to mentor new, visiting, full-time, and part-time faculty at the institution and department level.

#### Professional development of faculty members

Briefly describe the academic and professional development plan and arrangements for faculty such as teaching and learning strategies, assessment of learning outcomes, professional development, etc.

## 12. Acceptance Criterion

(Setting regulations related to enrollment in the college or institute, whether central admission or others)

## 13. The most important sources of information about the program

State briefly the sources of information about the program.

## 14. Program Development Plan



Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4

- Please tick the boxes corresponding to the individual program learning outcomes under evaluation.

## Course Description Form

1. Course Name:	
Calculus III	
2. Course Code:	
3. Semester / Year:	
First semester / Second Year	
4. Description Preparation Date:	
3/4/2024	
5. Available Attendance Forms:	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Weekly 4 hours (Total 60 hours) / 3 units	
7. Course administrator's name (mention all, if more than one name)	
Lecturer Intisar Swedain Ali ( Intisar @kecbu.uobaghdad.edu.iq)	
8. Course Objectives	
<b>Course Objectives</b>	<ul style="list-style-type: none"> <li>1- Consolidate the Mathematical knowledge and skills acquired at the secondary stage;</li> <li>2- Acquire knowledge and understanding, particularly by way of motivation and visualization, of basic concepts, terms, principles and symbols and underlying processes and skills;</li> <li>3- Develop mastery of basic algebraic skills;</li> <li>4- Develop drawing skills;</li> <li>5- Feel the flow of reason while proving a result or solving a problem;</li> <li>6- Apply the knowledge and skills acquired to solve problems and wherever possible, by more than one method;</li> <li>7- To develop ability to think, analyze and articulate logically;</li> <li>8- To develop necessary skills to work with modern technological devices and mathematical software's.</li> <li>9- To develop interest in mathematics as a problem-solving tool in various fields for its beautiful structures and patterns, etc.</li> <li>10- To develop interest in the subject by participating in related competitions;</li> <li>11- To acquaint students with different aspects of Mathematics used in daily life;</li> <li>12- To develop an interest in students to study Mathematics as a discipline.</li> </ul>
9. Teaching and Learning Strategies	
<b>Strategy</b>	Unlike other subjects, math builds on itself. You can't successfully move forward without a strong understanding of previous materials. And this makes math instruction difficult.

To succeed in math, students need to do more than memorize formulas. They need to develop a full understanding of what their math lessons mean, and how they translate into the real world. To reach that level of understanding, you need a variety of teaching strategies.

Conceptual understanding doesn't just happen at the whiteboard. But it can be achieved by incorporating fun math activities into your lessons, including

- Hands-on practice
- Collaborative projects
- Gamified or game-based learning

Repetition and homework are important. But for these lessons to really stick, your students need to find the excitement and wonder in math.

## 10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Matrices (determinant of matrix, inverse of matrix)			
2	4	Matrices (grammar's rules)			
3	4	Infinite sequences and series			
4	4	Partial derivatives (explicit and implicit differentiation, chain rules)			
5	4	Polar coordinates (relation between polar and Cartesian)			
6	4	Polar coordinates (graphing in polar coordinates)			
7	4	Multiple integrals			
8	4	Multiple integrals			
9	4	Triple integrals (integration in cylindrical coordinates)			
10	4	Triple integrals (integration in spherical coordinates)			
11	4	Triple integrals (integration in spherical coordinates)			
12	4	Ordinary differential equations first order (definition first order ordinary differential equation, types of first order ordinary differential equations and solve them)			
13	4	Ordinary differential equations first order (types of first order ordinary differential equations and solve them)			
14	4	Ordinary differential equations first order (types of first order ordinary differential equations and solve them)			
15	4	Ordinary differential equations second			

		order(method of undetermined coefficients) Ordinary differential equations second order( variation of parameters)		
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## 11. Course Evaluation

Quizzes, mid-term exam, assignments, labs, and seminar

## 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Thomas' Calculus, George B. Thomas Jr., Maurice D. Weir, Joel R. Hass, Twelfth Edition.
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	