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

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 staP 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, quaJerly), 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.

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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:

<u>Academic Program Description:</u> 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.

<u>Course Description</u>: 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.

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

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

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

<u>Curriculum Structure:</u> 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.

<u>Teaching and learning strategies:</u> 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: Signature: Scientific Associate Name:

Date:

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

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	Credit hours	Percentage	Reviews•
	Courses			
Institution				
Requirements				
College				
Requirements				

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Department		
Requirements		
Summer Training		
Other		

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

Program Description 7. **Credit Hours** Year/Level Course Code Course Name theoretical practical 8. Expected learning outcomes of the program Knowledge Learning Outcomes 1 Learning Outcomes Statement 1 Skills Learning Outcomes 2 Learning Outcomes Statement 2 Learning Outcomes 3 Learning Outcomes Statement 3 Ethics Learning Outcomes 4 Learning Outcomes Statement 4 Learning Outcomes \$ Learning Outcomes Statement 5 9. Teaching and Learning Strategies

Teaching and learning strategies and methods adopted in the implementation of

the program in general.

10. Evaluation methods

Implemented at all stages of the program in general.

Faculty Members	5						
Academic Rank	Specializ	zation	Special Requirements/Skills (if applicable)		Number of the teaching stat		
	General	Special			Staff	Lecturer	
Professional Dev	relopment						
Mentoring new facu	•						
Briefly describes the p	•	to mentor i	new, visiting, f	ull—time,	and part-	time faculty at	
			0.		·		
the institution and de	partment level						
			bers				
Professional develo	pment of fac	ulty mem		nt plan ar	nd arrangen	nents for faculty	
Professional develo Briefly describe the a such as teaching and	pment of fac cademic and p	ulty mem profession	al developme	•	•	-	
Professional develo Briefly describe the a	pment of fac cademic and p	ulty mem profession	al developme	•	•	-	
Briefly describe the a such as teaching and	pment of fac cademic and p	ulty mem profession	al developme	•	•	-	
Professional develo Briefly describe the a such as teaching and development, etc.	pment of fac cademic and p l learning strat	ulty mem profession	al developme	•	•	-	
Professional develo Briefly describe the a such as teaching and development, etc. 12. Acceptance	pment of fac cademic and p l learning strat	ulty mem profession regies, ass	al developmen sessment of le	arning ou	itcomes, pr	ofessional	
Professional develo Briefly describe the a such as teaching and development, etc. 12. Acceptance (Setting regulations	pment of fac cademic and p l learning strat e Criterion related to en	ulty mem profession regies, ass	al developmen sessment of le	arning ou	itcomes, pr	ofessional	
Professional develo Briefly describe the a such as teaching and development, etc. 12. Acceptance (Setting regulations	pment of fac cademic and p l learning strat e Criterion related to en	ulty mem profession regies, ass	al developmen sessment of le	arning ou	itcomes, pr	ofessional	
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Professional develo Briefly describe the a such as teaching and development, etc. 12. Acceptance (Setting regulations admission or others) 13. The most i	pment of fac cademic and p l learning strat e Criterion related to en) mportant so	ulty mem profession regies, ass nrollment i	al developments essment of le	or institu	utcomes, pr	ofessional er central	
Professional develo Briefly describe the a such as teaching and development, etc. 12. Acceptance (Setting regulations admission or others) 13. The most in State briefly the so	pment of fac cademic and p l learning strat e Criterion related to en) mportant so	ulty mem profession regies, ass nrollment i	al developments essment of le	or institu	utcomes, pr	ofessional er central	

	Program Skills Outline														
				Required program Learning outcomes											
Year/Level Course Course Basic or Code Name		Knov	Knowledge S		Skills			Ethics							
	o	optional	A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C 3	C4	

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

Course Description Form

1. Course Name:

Functional analysis 1

2. Course Code:

required

3. Semester / Year:

Fourth stage, first semester

4. Description Preparation Date:

28-3-2024

5. Available Attendance Forms:

Attendance

6. Number of Credit Hours (Total) / Number of Units (Total)

60 hours

7. Course administrator's name (mention all, if more than one name) Name: Prof. Dr. Laith K. Shaakir Email: dr.laithkhaleel@tu.edu.iq

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8. Course Objectives

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Functional analysis aims to introduce the student to the	
concepts of: vector spaces - metric spaces - normed	
spaces - convergence in normed spaces - Banach	
spaces. Linear functions defined on vector spaces and	
normed spaces	

9. Teaching and Learning Strategies

Strategy

10. Course Structure Required Learning Week Hours Evaluation Unit or subject Learning method Outcomes method name Vector spaces, Discussion 1 4 definitions and Lectures Vector spaces and tests examples definitions and examples about symmetric and Discussion 4 Lectures 2 absorbing sets symmetric and and tests absorbing sets

3	4	Subspaces with some examples	Subspaces	Lectures	Discussion and tests
4	4	definitions and examples with some theorems	Examples and theorems	Lectures	Discussion and tests
5	4	Concept of Basis and dimension of vector spaces	Basis and dimension	Lectures	Discussion and tests
6	4	Definition of Direct sum with some examples	Direct sum	Lectures	Discussion and tests
7	4	Definition of normed spaces	normed spaces	Lectures	Discussion and tests
8	4	Concept of product normed spaces	product normed spaces	Lectures	Discussion and tests
9	4	Equivalent normed spaces with some examples	Equivalent normed spaces	Lectures	Discussion and tests
10	4	The relation between normed spaces and metric spaces	Metric and normed spaces	Lectures	Discussion and tests
11	4	Converge sequences and Cauchy sequences in normed spaces	Convergence in normed spaces	Lectures	Discussion and tests
12	4	Banach spaces with examples	Banach spaces	Lectures	Discussion and tests
13	4	Convex sets, theorems and examples	Convexity	Lectures	Discussion and tests

14	4	Convex hull, theorems	Convex hull	Lectures	Discussion and tests
15	4	Definitions, examples and theorems	examples and theorems	Lectures	Discussion and tests

 11. Course Evaluation Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reportsetc 12. Learning and Teaching Resouces 					
Required textbooks (curricular books, if any)	مقدمة في التحليل الدالي,نوري فرحان المياحي و علي حسين بتور, 2005				
Main references(sources)	 Introductory Functional Analysis With Applications "Kreyszig1978, Introduction To Functional Analysis " by Sharma J.Vasishtha A.R, 1975 				
Reconnended books and references (scientific journals, reports,) Electronic references, websites					