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 Technology

Faculty/Institute: Computer Science

Scientific Department: Network Management Branch

Academic or Professional Program Name Network Management

Final Certificate Name: B.Sc. in Computer Science / Network Management

Academic System: Courses

Description Preparation Date: 20/2/2024

File Completion Date: /4/2024

Signature:

Head of Department Name:

Raheem Abdul Sahib Ogla

Date: 4/4/2024

Signature:

Scientific Associate Name:

Abeer Tariq Maolood

Date: 2/4/2024

The file is checked by: Nada Najeel Kamal

Quality Assurance and Performance Evaluation Division

Director of the Quality Assurance and Performance Evaluation Division

Date: 1/4/2024

Signature:

Approval of the Dean

Prof. Dr. Alaa Kadhim Farhan

2024/4/4

1. Program Vision

The Network Management Branch aspires to prepare and qualify competencies in the field of design, implementation and management of public and private networks, making it a leading model to be emulated in the field of applications that depend on the design of computer networks, their protocols, devices and topographic distribution.

2. Program Mission

This program covers computer and network management, which are vital to our modern technological society. Network Management program graduate work in the field of implementing and development of programming network applications and Internet, design and programming sites and learning the basics data transmission through both types of networks wired and wireless communications with safety manner.

3. Program Objectives

Objective 1: Combines a theoretical and practical study of network architectures
Objective 2: Design and programming Web sites, and management transmission by learning Protocols, communication programming, distributed systems to serve the society.
Objective 3: Study and programs security techniques to achieve secure communication.

4. Program Accreditation

Non.

5. Other external influences

Summer training.

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	6	Depending on the course between 3 and 1	14%	Basic
College Requirements	15	Depending on the course between 2 and 3	33%	Basic
Department Requirements	21	Depending on the course between 2 and 3	50%	Basic
Summer Training	yes	-	-	-
Other	1	3	3%	Basic

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

7. Program Description

Year/Level/course	Course Code	Course Name	Credit Hours	
			theoretical	practical
2023 – 2024/2nd/ 1st semester	CSCL2112	Object Oriented Programming I	2	2
	CSCL2114	Data Structures	2	2
	CSCL2116	Mathematics III	2	2
	CSCL2118	Database Foundation	2	2
	CSCL2123	Baath party crimes	2	
	CSCL2222	English Language II	2	
	CSCN2104	Digital Signal Processing	2	

Year/Level/course	Course Code	Course Name	Credit Hours	
			theoretical	practical
2023 – 2024/2nd/ 2nd semester	CSCL2213	Object oriented programming II	2	2
	CSCL2215	Sorting and Searching Algorithms	2	2

	CSCL2217	**Numerical Analysis**	**2**	**2**
	CSCL2219	**DataBase Design**	**2**	**2**
	CSCL2224	**Democracy and Human rights**	**2**	
	CSCN2205	**Communications**	**2**	
	CSCN2206	**Network Protocols**	**2**	

Year/Level/course	**Course Code**	**Course Name**	**Credit Hours**	
			theoretical	**practical**
2023 – 2024/ 3rd / 1st semester	CSCL3123	**Microprocessor**	**2**	**2**
	CSCL3125	**Computation Theory**	**2**	
	CSCL3127	**Operations Researches**	**2**	
	CSCN3166	**Knowledge Representation**	**2**	**2**
	CSCN1111	**Data Security I**	**2**	**2**
	CSCN3109	**Network Switching and Routing I**	**2**	**2**
	CSCN3107	**Networks Programming I**	**2**	**2**
	CSCL3133	**English Language III**	**2**	
Year/Level/course	**Course Code**	**Course Name**	**Credit Hours**	
			theoretical	**practical**
2023 – 2024/3rd / 2nd semester	CSCL3224	**Computer Architecture**	**2**	**2**
	CSCL3226	**Compiler Design**	**2**	**2**
	CSCL3228	**Optimization**	**2**	
	CSCL3230	**Intelligent Searching Techniques**	**2**	**2**
	CSCN3112	**Distributed Database I**	**2**	**2**
	CSCN3210	**Network Switching and Routing II**	**2**	**2**
	CSCN3208	**Networks Programming II**	**2**	**2**

Year/Level/course	Course Code	Course Name	Credit Hours	
			theoretical	practical
2023 – 2024/ 4rth / 1st semester	CSCL4134	Static Web Programming	2	2
	CSCN4113	Multimedia 1	2	
	CSCN4136	Operating system I	2	
	CSCN4117	Network Management I	2	2
	CSCN4119	Network Security I	2	
	CSCN4121	Wireless Foundations	2	
	CSCL444	Project	2	2
Year/Level/course	Course Code	Course Name	Credit Hours	
			theoretical	practical
2023 – 2024/4rth/ 2nd semester	CSCL4235	Dynamic Web Programming	2	2
	CSCN4214	Multimedia II	2	2
	CSCL4237	Operating system II	2	
	CSCN4218	Network Management II	2	2
	CSCN4220	Network Security II	2	
	CSCL4242	English Language IIII	2	
	CSCN4222	Wireless Techniques	2	2
	CSCL444	Project	2	2

8. Expected learning outcomes of the program

A. Knowledge
1- Have the knowledge and understanding to demonstrate basic facts, concepts, principles and theories related to computer networking. 2- Learn computer networking protocols. 3- Familiarity with advanced computer areas such as operating systems, mobile identification and distributed computing systems. 4- Have basic practical network concepts.
B. Skills
1. Questioning: Searching for new information by creating and raising questions. 2. Conclusion: Thinking beyond the available information to fill the gaps in it. 3. Comparing: Noting the similarities and differences between two or more things. 4. Classification: Putting things into groups according to common characteristics.
C. Ethics
1. Teamwork and the acquisition of administrative personality and social skills. 2. Writing programs that deal with computer networks and programming sites to serve the community 3. Writing protection programs for computer networks 4. Committing to Ethical attitude.

9. Teaching and Learning Strategies

1. Theoretical lectures
2. Practical (laboratory) lectures
3. Specialized workshops
4. Discussions and asking questions

10. Evaluation methods

1. Design and build laboratory systems including homework

2. Evaluation exams at all levels and at different times

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/ Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Prof Dr. Soukaena Hasan Hashem		Special			Staff	
Asst Prof Dr. Raheem Abdul sahib Ogla.		Special			Staff	
Prof Dr. Shaimaa Hameed Shaker		Special			Staff	
Prof Dr. Rana Fareed Kani		Special			Staff	
Asst Prof Dr. Israa Tahseen Ali		Special			Staff	
Asst Prof Dr. Khalil Ibraheem Kalil		Special			Staff	
Lec. Dr. Mohammad. Natiq .		Special			Staff	
Lec. Wisam.Mahmood wisam.		Special			Staff	
Lec Dr. Khitam AbdulNabikhitam		Special			Staff	
Lec Teaba.wala-Aldeen .khairi		Special			Staff	
Lec manar.mosab.alani		Special			Staff	
Lec Ammar FakhriMahdi		Networks			Staff	
Lec Rawaa.Sbaah.hussein		Special			Staff	

Professional Development

Professional development of faculty members

– Training courses – workshops – research and projects – specialized seminars – conferences – postgraduate studies

12. Acceptance Criterion

Central admission

13. The most important sources of information about the program
Labor market needs Keeping pace with scientific development in this field https://cs.uotechnology.edu.iq/index.php/branches/nw

14. Program Development Plan
The curricula are updated and developed to be compatible with the latest academic trends and labor market needs, and to ensure their compatibility with the program objectives and expected learning outcomes. Performance indicators and evaluation criteria are determined to measure the progress of plan of enhancement implementation, and the collected data is used to continuously improve the educational process.

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
Second Stage First Semester	CSCL2112	Object Oriented Programming I	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL2114	Data Structures	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL2116	Mathematics III	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL2118	Database Foundation	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL2123	Baath party crimes	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL2222	English Language II	Basic	✓		✓	✓	✓			✓	✓	✓	✓	✓
	CSCN2104	Digital Signal Processing	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Second Stage Second Semester	**CSCL2213**	**Object oriented programming II**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL2215	**Sorting and Searching Algorithms**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL2217	**Numerical Analysis**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL2219	**DataBase Design**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL2224	**Democracy and Human rights**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN2205	**Communications**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN2206	**Network Protocols**	Basic	✓		✓	✓	✓			✓	✓	✓	✓		

Third Stage First Semester	CSCL3123	**Microprocessor**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL3125	**Computation Theory**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL3127	**Operations Researches**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN3166	**Knowledge Representation**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN1111	**Data Security I**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN3109	**Network Switching and Routing I**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN3107	**Networks Programming I**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL3133	**English Language III**	Basic	✓		✓	✓	✓			✓	✓	✓	✓	

Third Stage Second Semester	CSCL3224	**Computer Architecture**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL3226	**Compiler Design**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL3228	**Optimization**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL3230	**Intelligent Searching Techniques**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN3112	**Distributed Database I**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN3210	**Network Switching and Routing II**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN3208	**Networks Programming II**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fourth Stage First Semester	**CSCL4134**	**Static Web Programming**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN4113	**Multimedia 1**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN4136	**Operating system I**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN4117	**Network Management I**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN4119	**Network Security I**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

	CSCN4121	**Wireless Foundations**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL444	**Project**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fourth Stage Second Semester	**CSCL4235**	**Dynamic Web Programming**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN4214	**Multimedia II**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL4237	**Operating system II**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN4218	**Network Management II**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN4220	**Network Security II**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCL4242	**English Language IIII**	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	CSCN4222	**Wireless Techniques**	Basic	✓		✓	✓	✓			✓	✓	✓	✓	✓

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