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: Department of Computer Science

Scientific Department: Computer Security and Cyber Security Branch

Academic or Professional Program Name: Computer Security and Cyber Security

Final Certificate Name: B.Sc. in Computer Science / Computer Security and Cyber Security

Academic System: Courses

Description Preparation Date: 31/3/2024

File Completion Date: 31/3/2024

Signature: 01/04/2024

Head of Department Name:

Ayad Hazim Ibrahim

Date: 01/04/2024

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 vision of the branch in the foreseeable term is to follow up the rapid developments in the field of computer security and its applications in the curriculum of the department and to graduate qualified and efficient cadres in the field of computer security and cybersecurity who hold primary and higher degrees

2. Program Mission

Work on preparing and graduating leading scientific and leadership competencies in the field of computer security and cybersecurity and developing the knowledge balance in the field of scientific research in this field by preparing information security and cybersecurity programmers to serve the local, regional and international community, as well as training and refining students' minds scientifically and cognitively, emphasizing social and cultural values and responding to the requirements of the local market.

3. Program Objectives

Apply strategies and technical skills to secure data and information protection
Study the commitment to ethical behavior in the field of information security
Applying the principles of scientific and methodological thinking to solve the problems and challenges of digital and cyber information security
Mastering the skills necessary for the student to move to the stage of a specialist in computer and information security

4. Program Accreditation

Non.

5. Other external influences

Non.

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 Code	Course Name	Credit Hours	
			theoretical	practical
2nd year 2023-2024/ First Course	CSCL2112	Object Oriented Programming 1	2	2
	CSCL2114	Data Structures	2	2
	CSCL2116	Mathematics 3	2	2
	CSCL2118	Data base Foundation	2	2
	CSCS2104	Stream cipher	2	2
	CSCL2123	Baath Party Crimes	2	
	CSCL2213	Objected oriented programming 2	2	2

2nd year 2023–2024/ Second Course	CSCL2215	**Sorting and searching algorithms**	**2**	**2**
	CSCL2217	**Numerical analysis**	**2**	**2**
	CSCL2219	**Data base design**	**2**	**2**
	CSCS2205	**Secure software design**	**2**	**2**
	CSCS2206	**Data and information security**	**2**	**2**
	CSCL2224	**Democracy and human rights**	**2**	–
	CSCL2222	**English language 2**	**2**	–
3rd year 2023–2024/ First Course	CSCL3123	**Microprocessor**	**2**	**2**
	CSCL3125	**Computation Theory**	**2**	–
	CSCL3129	**Knowledge Representation**	**2**	**2**
	CSCS3107	**Computer Networks 1**	**2**	**2**
	CSCS3106	**Malicious codes**	**2**	–
	CSCS3108	**Public Key**	**2**	**2**
	CSCS3109	**Multimedia Fundamentals**	**2**	**2**
	CSCL3133	**English Language 3**	**2**	–
3rd year 2023–2024/ Second Course	CSCL3224	**Computer Architecture**	**2**	**2**
	CSCL3226	**Compiler Design**	**2**	**2**
	CSCL3230	**Intelligent Searching Techniques**	**2**	**2**
	CSCS3210	**Mobile and network Security**	**2**	–
	CSCS3211	**Ethical Hacking**	**2**	–
	CSCS3212	**Block cipher Cryptography**	**2**	**2**
	CSCS3213	**Multimedia Security**	**2**	**2**
4th year 2023–2024/ First Course	CSCL4134	**Static Web Programming**	**2**	**2**
	CSCL4136	**Operating system 1**	**2**	**2**
	CSCS4116	**Cloud Computing Security**	**2**	–
	CSCS4117	**Information Hiding & Watermarking**	**2**	**2**
	CSCS4118	**Advance Cryptography**	**2**	–
	CSCS4119	**Intelligent Systems**	**2**	**2**

4th year 2023–2024/ Second Course	CSCL444	**Dynamic Web Programming**	**2**	**2**
	CSCL4235	**Secure Operating system**	**2**	**2**
	CSCL4237	**Crypt Analysis**	**2**	–
	CSCS4220	**Authentication and Access Control**	**2**	–
	CSCS4221	**Cyber Security**	**2**	–
	CSCS4223	**Soft Computing**	**2**	**2**
	CSCL4242	**English language 4**	**2**	–
	CSCL444	**project**		**2**

8. Expected learning outcomes of the program

A. Knowledge

1. Helps the student in understanding and developing security programs and systems.
2. The student can encrypt and analyze the code for any of the systems.
3. The student can detect intruders on networks or computers as well as protect data and its stores from tampering and voyeurism.
4. It helps the student to carry out simplified scientific and practical projects that show the extent of his comprehension as well as their practical application

B. Skills

1. Enables the student to encrypt or hide any information they wants.
2. Enables the student to develop encryption algorithms or invent a new algorithm and form research on this topic.
3. Enables the student to develop methods of protection for computers and networks from penetration and the detection of intruders.

C. Ethics

1. the student ways to analyze and solve the problem
2. Add mental skills to him

9. Teaching and Learning Strategies

1- Explain the scientific material to students in detail.

2- Student participation in solving mathematical problems
3- Discussion and dialogue on related vocabulary

10. Evaluation methods

monthly, daily exams and end-of-year exams.

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Professor	Computer science	Computer security			7	
Assistant Prof	Computer Science	Computer security			1	
Lecturer	Computer Science	Computer Security			1	
Lecturer	Computer Science	Network Security			1	
Lecturer	Computer engineering	Image processing			1	
Lecturer	Computer Science	Multimedia			1	
Lecturer	Computer Science	Video processing			1	

Assistant Lecturer	Electrical Engineering	Electrical engineering			1	
Assistant Lecturer	History	History				

Professional Development
Mentoring new faculty members
Attending in-person and electronic seminars and workshops
Professional development of faculty members
Attending in-person and electronic seminars and workshops

12. Acceptance Criterion

central

13. The most important sources of information about the program

- Labor market needs.

-Keeping pace with global development in this field.

- You can learn about the program from the university website;

https//uotechnology.edu.iq

14. Program Development Plan

There is an ongoing improvement plan for the branch and the department through the modernization of the scientific curriculum and the use of new concepts in the field of computer science and the use of modern devices to apply these concepts

Year/Level	Course Code	Course Name	Basic or optional	Knowledge				skills			Ethics	
				A1	A2	A3	A4	B1	B2	B3	C1	C2
2024-2023 / Second Level	**CSCL2112**	Object Oriented Programming 1	**Basic**	√	√	√	√	√	√	√	√	√
	CSCL2114	Data Structures	Basic	√	√	√	√	√	√	√	√	√
	CSCL2116	Mathematics 3	Basic	√	√	√	√	√	√	√	√	√
	CSCL2118	Data base Foundation	Basic	√	√	√	√	√	√	√	√	√
	CSCS2104	Stream cipher	Basic	√	√	√	√	√	√	√	√	√
	CSCL2123	Baath Party Crimes	Basic	√	√	√	√	√	√	√	√	√
	CSCL2213	Objected oriented programming 2	Basic	√	√	√	√	√	√	√	√	√
	CSCL2215	Sorting and searching algorithms	Basic	√	√	√	√	√	√	√	√	√
	CSCL2217	Numerical analysis	Basic	√	√	√	√	√	√	√	√	√
	CSCL2219	Data base design	Basic	√	√	√	√	√	√	√	√	√

	CSCS2205	Secure software design	Basic	√	√	√	√	√	√	√	√	√
	CSCS2206	Data and information security	Basic	√	√	√	√	√	√	√	√	√
	CSCL2224	Democracy and human rights	Basic	√	√	√	√	√	√	√	√	√
	CSCL21222	English language 2	Basic	√	√	√	√	√	√	√	√	√
2024-2023 / Third Level	**CSCL3123**	Microprocessor	Basic	√	√	√	√	√	√	√	√	√
	CSCL3125	Computation Theory	Basic	√	√	√	√	√	√	√	√	√
	CSCL3129	Knowledge Representation	Basic	√	√	√	√	√	√	√	√	√
	CSCS3107	Computer Networks 1	Basic	√	√	√	√	√	√	√	√	√
	CSCS3106	Malicious codes	Basic	√	√	√	√	√	√	√	√	√
	CSCS3108	Public Key	Basic	√	√	√	√	√	√	√	√	√
	CSCS3109	Multimedia Fundamentals	Basic	√	√	√	√	√	√	√	√	√
	CSCL3133	English Language 3	Basic	√	√	√	√	√	√	√	√	√
	CSCL3224	Computer Architecture	Basic	√	√	√	√	√	√	√	√	√

	CSCL3226	Compiler Design	Basic	√	√	√	√	√	√	√	√	√
	CSCL3230	Intelligent Searching Techniques	Basic	√	√	√	√	√	√	√	√	√
	CSCS3210	Mobile and network Security	Basic	√	√	√	√	√	√	√	√	√
	CSCS3211	Ethical Hacking	Basic	√	√	√	√	√	√	√	√	√
	CSCS3212	Block cipher Cryptography	Basic	√	√	√	√	√	√	√	√	√
	CSCS3213	Multimedia Security	Basic	√	√	√	√	√	√	√	√	√
2024-2023 / Fourth Level	**CSCL4134**	Static Web Programming	Basic	√	√	√	√	√	√	√	√	√
	CSCL4136	Operating system 1	Basic	√	√	√	√	√	√	√	√	√
	CSCS4116	Cloud Computing Security	Basic	√	√	√	√	√	√	√	√	√
	CSCS4117	Information Hiding & Watermarking	Basic	√	√	√	√	√	√	√	√	√
	CSCS4118	Advance Cryptography	Basic	√	√	√	√	√	√	√	√	√
	CSCS4119	Intelligent Systems	Basic	√	√	√	√	√	√	√	√	√
	CSCL444	Dynamic Web Programming	Basic	√	√	√	√	√	√	√	√	√

	CSCL4235	Secure Operating system	Basic	√	√	√	√	√	√	√	√	√
	CSCL4237	Crypt Analysis	Basic	√	√	√	√	√	√	√	√	√
	CSCS4220	Authentication and Access Control	Basic	√	√	√	√	√	√	√	√	√
	CSCS4221	Cyber Security	Basic	√	√	√	√	√	√	√	√	√
	CSCS4222	Soft Computing	Basic	√	√	√	√	√	√	√	√	√
	CSCS4223	Project	Basic	√	√	√	√	√	√	√	√	√
	CSCL4242	English language 4	Basic	√	√	√	√	√	√	√	√	√
	CSCL444	Secure software design	Basic	√	√	√	√	√	√	√	√	√

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