Republic of Iraq
Ministry of Higher Education & Scientific Research
Supervision and Scientific Evaluation Directorate
Quality Assurance and Academic Accreditation
International Accreditation *Dept.*

Academic Program Specification Form for the Academic Year 2023-2024

2024-2023

Introduction:

The educational program is considered a coordinated and organized package of academic courses that includes procedures and experiences organized in the form of academic vocabulary, the main purpose of which is to build and refine the skills of graduates, making them qualified to meet the requirements of the labor market. It is reviewed and evaluated annually through internal or external audit procedures and programs such as the external examiner program.

The description of the academic program provides a summary of the main features of the program and its courses, indicating the skills that students are working to acquire based on the objectives of the academic program. The importance of this description is evident because it represents the cornerstone of obtaining program accreditation, and the teaching staff participates in writing it under the supervision of the scientific committees in the scientific departments.

This guide, in its second edition, includes a description of the academic program after updating the vocabulary and paragraphs of the previous guide considering the latest developments in the educational system in Iraq, which included a description of the academic program in its traditional form (annual, quarterly), in addition to adopting the description of the academic program circulated according to the book of the Department of Studies 3/2906. On 5/3/2023 about programs that adopt the Bologna Process as a basis for their work.

In this area, we can only emphasize the importance of writing descriptions of academic programs and courses to ensure the smooth conduct of the educational process.

Concepts and terminology:

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

Course description: It provides a necessary summary of the most important characteristics of the course and the learning outcomes that the student is expected to achieve, demonstrating whether he has 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 an advanced, inspiring, motivating, realistic and applicable program. **Program message:** It briefly explains the objectives and activities necessary to achieve them and identifies the program's development paths and directions.

Program Goals: They are statements that describe what the academic program intends to achieve within a specific period and are measurable and observable. **Curriculum**

structure: All courses/study subjects included in the academic program according to the approved learning system (semester, annual, Bologna track), whether it is a requirement (ministry, university, college, or scientific department), along with the number of study units.

Learning Outcomes: A compatible set of knowledge, skills, and values that the student has acquired after successfully completing the academic program. The learning outcomes for each course must be determined in a way that achieves the program objectives.

Teaching and learning strategies: They are the strategies used by a faculty member to develop student teaching and learning, and they are plans that are followed to reach learning goals. That is, it describes all curricular and extracurricular activities to achieve the learning outcomes of the program.

Academic Program Specification Form

University: Al-Kitab University

College/Institute: College of Engineering Technology

Scientific Department: Department of Aeronautical Engineering Technique.

Academic or professional program: Bachelor of Aeronautical Engineering Technique.

Name of the final certificate: Bachelor's degree in Aeronautical Engineering Technique.

Academic system: Yearly System

Description preparation date: 3/17/2024

Date of filling the file: 7/4/2024

signature:

Name of scientific assistant:

the date : 14.4.2024

The file has been checked from

Quality Assurance and University Performance

Name of the manger of the University Quality Assurance and Performance:

the date

the signature

Dean's Name: Hussien Ibzar Zynal

signature:

1. Program vision

Preparing engineers in the specialization of computer technology, with its two branches, computer communication networks and computer electronics. These graduates will be responsible for examining, and recognizing the country's needs for development and progress. These engineers are able to meet the needs of the labor market in both state institutions and private industry sectors.

2. Program message

The program message is that the department's graduates should contributes to meet the country's needs in the field of Computer Engineering Techniques (academic and research) and all public and other private sectors.

3. Program objectives

1- Preparing engineering to put scientific knowledge and the scientific method of thinking and analysis at the service of the country's goals, enabling it to pursue its higher studies and adapting to the development of technologies in order to keep pace with the expansion of human needs.
2- Developing the new generation of engineers, and preparing them as future scientific leaders in the field of computer technology engineering, and working to strengthen the position of department in particular among the other Iraqi and regional departments of the same discipline.
3- Emphasizing on a strong foundation, especially in field of computer technology engineering, and constantly striving to support them in various fields to make them able to solve problems, and possess the communication skills necessary to provide quality services to the society in various aspects.
4- Providing an appropriate academic environment for study and research to contribute to finding solutions to engineering problems using appropriate techniques, in addition to actively contributing to deepening and documenting the department's relationship with society through the implementation of advisory work, training and development of teaching and administrative human resources.

4. Programmatic accreditation
Non Yet

5. Other external influences
Laboratories, library

6. Program structure				
Program structure	Number of courses	Unit of study	percentage	Notes*
Organization requirements	%2.5	2	1	Basic
College requirements	%12.5	11	5	Basic
Department requirements	%80	184	32	Basic
summer training	5%	0	2	Basic
Other	%100	197	40	

* All of these values are identical to the affiliated department of Computer Engineering Techniques / College of Engineering Technology / Middle Technical University – Baghdad.

Level / Year		Course or Module Code	Course or Module Title	Weekly Hours		Credits	
				T	P+O		
First Level – Bologna System	Semester 1	BCTE101-S1	Digital Logic	4.93	6.73	7	12. Awards and Credits Required units = 174 For B. Sc. degree
		BCTE102-S1	Mathematics	3	4.4	5	
		BCTE103-S1	COMPUTER ORGANIZATION	4.2	6	6	
		BCTE104-S1	Engineering Drawing	3	2	3	
		BCTE105-S1	fundamentals of electrical engineering	4	7	7	
		BCTE106-S1	Human rights and Democracy	2	0.56	2	
	Semester 2	BCTE101-S2	Digital Circuits	4.93	6.73	7	
		BCTE102-S2	Engineering Mathematics	3	4.4	5	
		BCTE103-S2	Computer Programming	4	5.9	6	
		BCTE104-S2	Electronic Workshop	2	3	3	
		BCTE105-S2	electrical Circuits	4	7	7	
		BCTE106-S2	English Language	1	1.12	2	
Second		CTE02207	Computer Application	1	2	4	
		CTE02202	Mathematics (II)	1T+2	-	4	
		CTE02203	Microprocessor and Computer Architecture	2	3	7	
		CTE02204	Instrumentation and Measurements	2	2	6	
		CTE02205	Computer Programming (II)	2	2	6	
		CTE02206	Communication Fundamentals	1T+2	2	6	
		CTE02208	Electronics	2	2	6	
		CTE02250	Training	-	-	-	
		ENG05201	English Language 2	1	-	2	
Third Computer Commu		CTE02310	Computer Networks Simulators	1	2	4	
		CTE02302	Engineering Analysis	2	2	6	
		CTE02303	Control Engineering Fundamentals	2	2	6	
		CTE02304	Computer Networks Fundamentals	2	2	6	

	CTE02305	Real Time Systems Design	2	2	6	
	CTE02306	Digital Signal Processing(DSP)	2	2	6	
	CTE02307	Digital Communication	2	2	6	
	CTE023xx	Elective Course	2	2	6	
	CTE02350	Training				
	ENG05301	English Language 3	1	-	2	
Third Computer Electronics	CTE02301	Electronic Systems Simulators	1	2	4	
	CTE02302	Engineering Analysis	2	2	6	
	CTE02303	Control Engineering Fundamentals	2	2	6	
	CTE02309	Power Electronic	2	2	6	
	CTE02305	Real Time systems Design	2	2	6	
	CTE02306	Digital Signal Processing(DSP)	2	2	6	
	CTE023xx	Elective Course	2	2	6	
	CTE02308	Digital Controllers	2	2	6	
	CTE02350	Training	–	–	-	
	ENG05301	English Language 3	1	-	2	
Fourth Computer Comm-unications Networks	CTE02401	Computer Networks Protocols	2	2	6	
	CTE02402	Information Theory and Coding	2	2	6	
	CTE02403	Mobile Communication	2	2	6	
	CTE02404	Security of Computer and Networks	2	2	6	
	CTE02405	Project Management	2	2	6	
	CTE02406	Multimedia Computing	2	2	6	
	CTE024xx	Elective Course	2	2	6	
	CTE02413	Project	-	4	4	
	ENG05401	English Language 3	1	-	2	
Fourth Computer Electronics	CTE02409	Smart Systems Modeling	2	2	6	
	CTE02431	Advanced Computer Technology	2	2	6	
	CTE02432	Computer Interface Circuits Design	2	2	6	
	CTE02433	Advanced Digital Electronics	2	2	6	
	CTE02405	Project Management	2	2	6	
	CTE02434	Computer Networks	2	2	6	
	CTE024xx	Elective Course	2	2	6	
	CTE02413	Project	-	4	4	
	ENG05401	English Language 3	1	-	2	

7. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Learning outcome

A-1- Graduating people with a high level of understanding and knowledge capable of building, analyzing and developing computer systems while following up on these after graduation.

A-2- The ability to analyze engineering and scientific problems by applying laws in science, mathematics and engineering and to abide by the instructions for any effectiveness in the organizational and administrative framework in the implementation of a project or facing an engineering problem, solving and evaluating it and submitting a proposal or a plan or reformulating it, translating or interpreting it.

A-3- The student should be able to speak and write in an effective scientific and engineering style in Arabic and English.

A-4- Motivating our students to actively participate in the renaissance and progress of society through holding seminars, conferences, continuing education, and providing academic consultations in the fields of computer techniques engineering.

A-5- The student should be able to do, scientific and applied research, in computer engineering techniques fields for the purpose of solving industrial problems.

B. Subject-specific skills

B-1 - The ability to apply the techniques and tools of computer engineering in its two branches of networks, and electronics.

B-2 - Analyzing technical problems and providing a suitable solution.

B-3 - Scientific investigation and evaluation.

B. Teaching and Learning Methods

There are many teaching and learning methods used in the Department of Computer Technology Engineering, Computer Communication Networks Branch and Computer Electronics Branch. The learning is done through practical applications, and theoretical lectures using traditional board teaching, PPT presentation, discussion groups, and seminars, and student is asked to investigate topics and problems through the internet.

The method of Bologna System will be applied.

C. Assessment methods

1. Seminars.
2. Academic debate, oral dialogue, and semester and final theoretical and practical written examinations.
3. Writing and submitting reports and taking notes on the technical expertise gained in the field visits.

8. The teaching staff

Teaching staff

Academic rank	specialty		Special requirements/skills (if applicable)		
	general	Exact		employee	lecturer
Prof. Dr. Ayad Gh. Ismael	Computer Science	Computer information systems		√	
Prof. Dr. Sameer Saadoon	Electrical Engineering	combustion		√	
Asst. Prof. Dr. Kadum M. Hussain	Mechanical Engineering	Renewable energy		√	
Dr. Hayder K. Easa	Computer Science	Image processing		√	
Asst. Lecturer Hanan M. Shukur	Computer Science	Information security		√	
Asst. Lecturer Abdulsalam Hassan	Electrical Engineering	Information security		√	
Asst. Lecturer Firas Omar	Computer Science	Software Engineering		√	
Asst. Lecturer Ali Ali Sabir	Electrical Engineering	Software Engineering		√	

9. Professional development

Orienting new faculty members

Training and development of professors: By providing training programs and workshops for faculty members to develop their educational skills and update their academic knowledge in the field of Computer Engineering Techniques which enhances the quality of teaching and learning in the specialty.

Professional development for faculty members

Professional development for faculty members is considered important to enhance their competence and improve their performance in the field of Computer Engineering Techniques. Faculty can develop their skills by attending workshops and training courses, and participating in educational seminars and conferences. They can also exchange knowledge and experiences with

colleagues in the field of Computer Engineering Techniques, and use technology to improve the teaching process. This helps them innovate and improve the quality of education they provide to students.

10. Acceptance criterion

Students in the department Computer Engineering Techniques are accepted from graduates of preparatory studies in its scientific stream, with a grade of 60 %, and the graduation requirements are:

- Performing 136 course hours over the years of study.
- Passing the prescribed exams with a grade of 50 % or more
- Performing summer training before the final stage.
- Submitting graduation research in one of the specialty topics.

11. The most important sources of information about the program

Iraqi government universities and international universities related to the specialty.

12. Program development plan

A. Analyze the current situation: This can be done by evaluating the current curriculum and analyzing its strengths and weaknesses and searching for opportunities for improvement and identify areas that need development.

B. Setting goals: Setting the main goals for developing the academic curriculum is considered one of the most important steps in developing any program, as the goals can include increasing educational quality, improving the student experience and enhancing academic and personal developments.

C. Continuous evaluation and review: By conducting periodic evaluation and review of the curriculum and teaching methods and communicating with students and professors to collect observations and comments. Use this feedback to improve and enhance your academic curriculum.

13. Curriculum Skills Map

please tick in the relevant boxes where individual Programme Learning Outcomes are being assessed

Year/ Level		Course Code	Course Title	Core / Option	Knowledge And understanding				Subject-specific skills				Thinking Skills				General and Transferable Skills (or) Other skills relevant to employability and personal development			
					A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4	D1	D2	D3	D4
Level One - Bologna System	Semester 1	BCTE101-S1	**Digital Logic**	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
		BCTE102-S1	Mathematics	Basic	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√
		BCTE103-S1	**COMPUTER ORGANIZATION**	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
		BCTE104-S1	Engineering Drawing	C	√	√	√	√	√	√	√	√	√	√	√		√	√	√	
		BCTE105-S1	**fundamentals of electrical engineering**	C	√	√	√	√	√	√	√	√	√	√			√	√	√	√
		BCTE106-S1	**Human rights and Democracy**	Supplement	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	Semester 2	BCTE101-S2	**Digital Circuits**	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
		BCTE102-S2	**Engineering Mathematics**	Basic	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
		BCTE103-S2	**Computer Programming**	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
		BCTE104-S2	Electronic Workshop	C	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√

		BCTE105-S2	**electrical Circuits**	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
		BCTE106-S2	**English Language**	Supplement																
Second		CTE20201	Computer Application	C	√	√	√		√	√	√		√	√	√		√	√	√	√
		CTE20202	Mathematics (II)	C	√	√	√	√	√	√	√	√	√	√	√		√	√	√	
		CTE10203	Microprocessor and Computer Architecture	C	√	√	√	√	√	√	√		√	√	√		√	√	√	√
		CTE10204	Instrumentation and Measurements	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
		CTE10205	Computer Programming (II)	C	√	√	√	√	√	√	√	√	√	√			√	√	√	√
		CTE10206	Electronics	C	√	√	√	√	√	√	√		√	√			√	√	√	√
		CTE10207	Communication Fundamentals	C	√	√	√	√	√	√	√		√	√	√		√	√	√	
		CTE40208	Training	C																
Third Computer Communication Networks		CTE20301	Computer Networks Simulators	C	√	√	√	√	√	√	√	√	√	√			√	√	√	√
		CTE20302	Engineering Analysis	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
		CTE20303	Control Engineering Fundamentals	C	√	√	√	√	√	√	√	√	√	√			√	√	√	√
		CTE10304	Computer Networks Fundamentals	C	√	√	√	√	√	√			√				√	√	√	

	CTE10305	Real Time Systems Design	C	√	√			√	√	√	√	√	√	√	√	√	√	√	√
	CTE10306	Digital Signal Processing (DSP)	C	√	√	√	√	√	√	√		√	√	√		√	√	√	
	CTE10307	Digital Communication	C	√	√	√		√	√	√		√	√	√		√	√	√	
	CTE10308	Elective Course	O	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	CTE40309	Training	C																
Third Computer Electronics	CTE20310	Electronic Systems Simulators	C	√	√	√	√	√	√	√	√	√	√			√	√	√	√
	CTE20302	Engineering Analysis	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	CTE20303	Control Engineering Fundamentals	C	√	√	√	√	√	√	√	√	√	√			√	√	√	√
	CTE10311	Power Electronic	C	√	√	√	√	√	√	√		√	√	√		√	√	√	
	CTE10305	Real Time systems Design	C	√	√			√	√	√	√	√	√	√	√	√	√	√	√
	CTE10306	Digital Signal Processing (DSP)	C	√	√	√	√	√	√	√		√	√	√		√	√	√	
	CTE10312	Digital Controllers	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	CTE10313	Elective Course (Digital Communication)	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	CTE40309	Training																	

			C																
Fourth Computer Electronics	CTE20409	Smart Systems Modeling	C	√	√	√	√	√	√	√	√	√	√			√	√	√	√
	CTE10410	Advanced Computer Technology	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	CTE10411	Computer Interface Circuits Design	C	√	√	√		√	√	√	√	√	√			√	√	√	√
	CTE10412	Advanced Digital Electronics	C	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√
	CTE10413	Computer Networks	C	√	√	√	√	√	√	√		√				√	√	√	√
	CTE10406	Project Management	C	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√
	CTE10415	Elective Course	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	CTE10408	Project	C																
Fourth Computer Communication Networks	CTE10401	Computer Networks Protocols	C	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√
	CTE10402	Information Theory and Coding	C	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√
	CTE10403	Mobile Communication	C	√	√	√	√	√	√	√		√	√			√	√	√	
	CTE10404	Security of Computer and Networks	C	√	√	√	√	√	√	√	√	√	√			√	√	√	√
	CTE10405	Multimedia Computing	C	√	√	√	√	√	√	√	√	√	√			√	√	√	√

	CTE10406	Project Management	C	√	√	√	√	√	√	√		√	√	√	√	√	√	√	√
	CTE10407	Elective Course	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
	CTE10408	Project	C																