

**Ministry of Higher Education and Scientific  
ResearchScientific Supervision and Scientific  
Evaluation Apparatus Directorat of Quality  
Assurance and Academic Accreditation  
Accreditation Department**



# **Academic Program and Course Description Guide**

**2025-2024**

## Introduction:

The educational program is a coordinated and organized package of courses that include procedures and experiences organized in the form of academic vocabulary whose main purpose is to build and refine the skills of graduates, making them qualified to meet the requirements of the labor market, which 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 brief summary of the main features of the program and its courses, indicating the skills that are being worked on to acquire for students based on the objectives of the academic program, and the importance of this description is evident because it represents the cornerstone in obtaining program accreditation and is written jointly by the teaching staff under the supervision of the scientific committees in the scientific departments. This guide, in its second version, includes a description of the academic program after updating the vocabulary and paragraphs of the previous guide in light of the developments and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly) system, as well as the adoption of the description of the generalized academic program according to the book of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna track as a basis. In this regard, we can only emphasize the importance of writing a description of academic programs and courses to ensure the proper functioning of the educational process.

### Concepts and terminology:

**Academic Program Description:** The description of the academic program 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 student to achieve, proving whether he has made the most of the available learning opportunities. It is derived from the description of the program.

**Program Vision:** An ambitious picture for the future of the academic program to be a sophisticated, inspiring, stimulating, realistic and applicable program.

**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 (semester, yearly, Bologna track) whether Requirement (ministry, university, college and scientific they are required department) with the number of study units.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by the student 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 member to develop the student's teaching and learning, and they are plans that are followed to reach the learning goals. That is, describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

### Academic Program Description Form

University Name: AL-Kitab

Faculty/Institute: College of Technical Engineering

Scientific Department:

Computer Technology Engineering Techniques

Academic or Professional Program Name: Bachelor of Computer Technology Engineering

Final Certificate Name: Bachelor of Computer Technology Engineering Technologies

Academic System: Yearly

Date of preparation of the description: 17/1/2025

File Filling Date: 17/1/2025

Signature:

Hussien Izar

Head of Department Name:

Date: 2025/2/2

Signature:

Scientific Associate Name:

Dr. Faris Hassan Taha

Date: 3/2/2025

the file is checked by

Division of Quality Assurance and University Performance

Name of the Director of the Quality Assurance and University Performance Division:

Date: 9/2/2025

Signature:

Authentication of Mr. Dean

Asst. Prof. Dr.  
Mohammed Taha  
Mohammed



| Program Vision •                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Achieving leadership and excellence in all aspects of computer technology engineering, academic, professional, community service, and providing study programs and research activities in the field of computer technology engineering. |

| Program Mission •                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Qualifying graduates and human cadres in the field of computer technologies in a way that contributes to meeting the needs of the country in the field of computer technology engineering (academically and research) of all types and sizes for public and private sector departments. |

| Program Objectives •                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Preparing engineering cadres in the field of computer technology engineering, which is responsible for studying the country's need for development and progress and is able to meet the needs of the labor market in state institutions and industry sectors, and to pursue its graduate studies to adapt to modern technical development |

| Programmatic accreditation • |
|------------------------------|
| AICBA                        |

| Other external influences • |
|-----------------------------|
| Laboratories, Libraries     |

| Program Structure •      |                   |               |            |        |
|--------------------------|-------------------|---------------|------------|--------|
| Program structure        | Number of courses | Unit of study | percentage | Notes* |
| Organization Requirments | 1                 | 4             | %9         | Basic  |
| College requirements     | 6                 | 21            | 11%        | Basic  |
| Department Requirments   | 23                | 111           | 60%        | Basic  |
| Summer Training          | 2                 |               |            | Basic  |
| Other                    |                   |               |            | Basic  |

\* All of these values are identical to the Department of Aeronautical Polytechnic Engineering/ College of Engineering Technology / Central Technical University - Baghdad, because we are the university affiliated with them

\*The notes Include whether the Module is Basic or not

|                    |
|--------------------|
| Program Structure7 |
|--------------------|

| ECTS |   | Credit Hours                        | Module name | Module code  | Stage/Year |
|------|---|-------------------------------------|-------------|--------------|------------|
| 4    | 3 | Computer Applications               | 207CTE02    | Second stage |            |
| 4    | 3 | 2 ) Mathematic (                    | CTE02202    |              |            |
| 7    | 5 | Microprocessor arcitechture         | CTE02203    |              |            |
| 6    | 4 | Devices and measurment              | CTE02204    |              |            |
| 6    | 4 | Object Orianted Programming         | CTE02205    |              |            |
| 6    | 5 | Fundamentals of communications      | CTE02206    |              |            |
| 6    | 4 | Electronic                          | CTE02208    |              |            |
| 2    | 1 | English language                    |             |              |            |
| 4    | 3 | Computer network simulators         | CTE02310    | Third stage  |            |
| 6    | 4 | Engineering analyses                | CTE02302    |              |            |
| 6    | 4 | Fundamentals of control engineering | CTE02303    |              |            |
| 6    | 4 | Foundations of computer networks    | CTE02304    |              |            |
| 6    | 4 | Design of real time systems         | CTE02305    |              |            |
| 6    | 4 | Digital Signal processing           | CTE02306    |              |            |
| 6    | 4 | Digital communications              | CTE02307    |              |            |
| 2    | 1 | English                             |             |              |            |

|   |   |                                          |          |              |
|---|---|------------------------------------------|----------|--------------|
| 4 | 3 | Computer networking protocols            | CTE02301 | Fourth stage |
| 6 | 4 | TeleCommunications systems               | CTE02302 |              |
| 6 | 4 | Security of computers and their networks | CTE02303 |              |
| 6 | 4 | Media computing                          | CTE02309 |              |
| 6 | 4 | Information theory and coding            | CTE02305 |              |
| 6 | 4 | project management                       | CTE02306 |              |
| 6 | 4 | Professional ethics                      | CTE023xx |              |
| 6 | 4 | Advanced digital electronics             | CTE02308 |              |

| Expected learning outcomes of the program •                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Knowledge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p>Results</p> <p>B1 – Qualifying the student to practice the profession of computer technology engineering and take responsibility for education.</p> <p>B2 – Enable the student to keep pace with the methods of training computer technology engineering.</p> <p>B3 – Providing the student with the necessary skills in dialogue and discussion.</p> <p>B4 – Enable students to prepare analytical statements and lists and enhance their skills in computer technology engineering and practical analysis.</p> | <p>A. Knowledge</p> <p>A1- Graduating engineering cadres with an integrated leadership personality and high professional skills and ethics that meet the needs of Civil and military state institutions relevant to competence.</p> <p>A2 - The ability to engineering analysis and scientific thinking through the application of laws in science, mathematics and engineering and adherence to the guidelines and instructions to implement a project or face an engineering problem, solve and evaluate it, submit a proposal or plan, reformulate, translate or interpret it.</p> <p>A3- The student should be able to speak and write in an influential engineering scientific style in Arabic and English.</p> <p>A4- Motivating students to participate effectively in the renaissance and progress of society through the establishment of seminars, conferences, continuing education and providing academic consultations in the fields of computer technology engineering engineering.</p> <p>A 5- The student should be able to write scientific and applied research in the engineering fields for the purpose of solving industrial and service problems in society</p> <p>A6- Active participation in the renaissance and</p> |

|                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|                                                                                                                                                                                                                                                                                                                                                      | progress of society through the establishment of seminars, conferences, continuing education and providing academic consultations in the fields of computer technology engineering engineering.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| skills                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| Results<br>B1 – Enables the student to use scientific and technological tools for computer technology engineering.<br>B2 – Enables the student to write scientific research<br>B3 - Enables the student to teach subjects related to computer technology engineering.<br>B4 - - The student acquires the necessary skills in dialogue and discussion | B- Subject-specific skills<br>B1 – The ability to use scientific and technological tools to engineer computer technologies.<br>B2 – Analysis of technical problems to find appropriate solutions for them.<br>B3 - The use of scientific investigation and evaluation to solve engineering problems.<br>B4 - The student acquires the necessary skills in dialogue and discussion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Statement of Learning Outcomes<br>Enables the student to know the basics of computer technology engineering engineering.                                                                                                                                                                                                                             | Learning Outcomes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Evaluation                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |
| Results<br>All tests aim to raise the student to love the profession of computer technology engineering and creativity in it.                                                                                                                                                                                                                        | A - Objective tests: The aim of the test is to measure the student's ability to recognize and absorb engineering facts. This is done using the following:<br>- True and false questions.<br>- Multiple selection questions.<br>- Interview questions (blank questions)<br>- Supplementation questions.<br><br>B - Engineering tests: The objective of the test to measure the student's ability to understand the scientific material and engineering principles and the ability to recall, link and interpret this in addition to the ability to analyze data and use it in the diagnosis and solution of problems Hamddis. This is done using the following:<br>- Test connection/open questions.<br>-Questions that have a specific answer.<br>C - For other tests: represented by the following:<br>- Seminars (seminars).<br>- Scientific lectures, oral dialogue, semester and final theoretical exams, in addition to the practical exam.<br>- Report writing.<br>- Field visits |  |
| Statement of Learning Outcomes                                                                                                                                                                                                                                                                                                                       | Learning Outcomes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |

|                                                      |                                                                                               |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Learn about computer technology engineering and arts | Providing the student with the skills of mastering the art of computer technology engineering |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------|

|                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • Teaching and learning strategies •                                                                                                                            |
| 1- Thinking strategy according to the student's ability.<br>2- High thinking skill strategy.<br>3- Critical thinking strategy in learning.<br>4- Brainstorming. |

|                        |
|------------------------|
| • Evaluation methods • |
| a-home works           |
| b- Classroom tasks     |
| C. Free Discussions    |

| Teaching staff |          |                                            |  |                |                                         |                                    |
|----------------|----------|--------------------------------------------|--|----------------|-----------------------------------------|------------------------------------|
| Teaching staff |          |                                            |  |                |                                         |                                    |
| Members        |          | Specials recruitments/skills (if demanded) |  | Specialization |                                         | Academic Rank                      |
| Employee       | Lecturer |                                            |  | Exact          | General                                 |                                    |
|                | √        |                                            |  | thermodynamics | Mechanical Engineering and Mechatronics | Professor Samir Saadoon Al-Jubburi |
|                | √        |                                            |  | Electronics    | Electrical Engineering                  | Assist Lecturer Firas Omer Ahmed   |
|                | √        |                                            |  |                | Mechanical Engineering                  | Assist Lecturer Ali Ali Sabir      |
|                | √        |                                            |  | Composites     | Mechanical Engineering                  | Assist Lecturer Hanan Mahmood      |

|  |   |  |  |                     |                                        |                                           |
|--|---|--|--|---------------------|----------------------------------------|-------------------------------------------|
|  |   |  |  | Materials           | and                                    | Shukur                                    |
|  | √ |  |  | Electronics         | Mechatronics<br>Electrical Engineering | Assist Lecturer<br>Noor Jasim             |
|  | √ |  |  | Renewable resources | Mechanical Engineering                 | Assist Lecturer<br>Ibrahim Khalil Ibrahim |

| Professional Development                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mentoring 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 technology engineering, which enhances the quality of teaching and learning in the specialization.                                                                                                                                                                                     |
| Professional development of faculty members                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| The professional development of faculty members is important to enhance their competence and improve their teaching performance. Faculty can develop their skills by attending workshops and training courses, participating in educational seminars and conferences, which also enable them to share knowledge and experiences with their colleagues in the field and use technology to improve the teaching process, innovation and improve the quality of education they provide to students. |

|                                                                                                                                                                                                          |
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| Students are accepted in the Department of Computer Technology Engineering from graduates of the preparatory school in its scientific branch with an average of 60% and the graduation requirements are: |
| 1- Performing the 136 hours of courses over the years of study                                                                                                                                           |
| 2- Passing the prescribed exams with a rate of 50% or more                                                                                                                                               |
| 3- Performing summer training before the final stage.                                                                                                                                                    |
| 1- Presenting a graduation research in one of the topics of specialization.                                                                                                                              |

| The most important sources of information about the program                        |
|------------------------------------------------------------------------------------|
| Iraqi public universities and international universities related to specialization |

| Acceptance criterion                                                                                                                                                                                                                                                                                                                       |
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| a. Analysis of the current situation: by evaluating the current approach, analyzing its strengths and weaknesses, looking for opportunities for improvement, and identifying areas that need to be developed.                                                                                                                              |
| In. Setting goals: It means setting the main objectives of developing the academic curriculum, which is one of the most important steps in the development of any program, where the goals can include increasing the quality of education, improving the student experience, and enhancing academic development and personal development. |

c. Continuous evaluation and review: By conducting periodic evaluation and review of the curriculum and teaching methods, communicating with students and professors to collect feedback and use these observations to improve and enhance the academic curriculum.

### Curriculum skills chart

Please check the boxes corresponding to the individual learning outcomes from the program being assessed

Learning outcomes required from the programme

|        | Thinking skills |    |    | Subject-specific skills |    | Knowledge and understanding |    |    |    | Basic Or assistant | Course name           | Course code | Year/level            |
|--------|-----------------|----|----|-------------------------|----|-----------------------------|----|----|----|--------------------|-----------------------|-------------|-----------------------|
|        |                 |    |    |                         |    |                             |    |    |    |                    |                       |             |                       |
| ج<br>4 | 3ج              | 2ج | 1ج | 2ب                      | 1ب | 4ا                          | 3ا | 2ا | 1ا |                    |                       |             |                       |
|        |                 |    |    |                         |    |                             |    |    |    |                    |                       |             |                       |
|        | √               | √  | √  | √                       | √  | √                           | √  | √  | √  | assistant          | Computer Applications | CTE02207    | 2 <sup>nd</sup> stage |
| √      | √               | √  | √  | √                       | √  | √                           | √  | √  | √  | Basic              | Architectu            | CTE02203    |                       |

|   |   |   |   |   |   |   |   |   |   |           |                                       |          |                          |
|---|---|---|---|---|---|---|---|---|---|-----------|---------------------------------------|----------|--------------------------|
|   |   |   |   |   |   |   |   |   |   |           | re of<br>microproc<br>essors          |          |                          |
|   |   | √ | √ | √ | √ | √ | √ | √ | √ | Basic     | Object<br>oriented<br>Programm<br>ing | CTE02205 |                          |
|   |   | √ | √ | √ | √ | √ | √ | √ | √ | Basic     | Electronic<br>s                       | CTE02208 |                          |
|   | √ | √ | √ | √ | √ | √ | √ | √ | √ | assistant | Mathemati<br>cs(2)                    | CTE02202 |                          |
|   |   | √ | √ | √ | √ | √ | √ | √ | √ | Basic     | Devices<br>and<br>measurme<br>nts     | CTE02204 |                          |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | Basic     | Digital<br>controllers                | CTE02206 |                          |
|   |   | √ | √ | √ | √ | √ | √ | √ | √ | assistant | Computer<br>network<br>simulators     | CTE02310 |                          |
|   |   |   | √ | √ | √ | √ | √ | √ | √ | Basic     | Fundamen<br>tals of                   | CTE02303 | 3 <sup>rd</sup><br>stage |

|   |   |   |   |   |   |   |   |   |   |           |                                            |          |                          |
|---|---|---|---|---|---|---|---|---|---|-----------|--------------------------------------------|----------|--------------------------|
|   |   |   |   |   |   |   |   |   |   |           | control<br>engineerin<br>g                 |          |                          |
| √ | √ | √ | √ | √ | √ |   |   | √ | √ | Basic     | Design of<br>real time<br>systems          | CTE02305 |                          |
|   | √ | √ | √ | √ | √ | √ | √ | √ | √ | Basic     | Digital<br>communic<br>ations              | CTE02307 |                          |
|   | √ | √ | √ | √ | √ |   | √ | √ | √ | Basic     | Engineerin<br>g analyses                   | CTE02302 |                          |
|   |   | √ | √ | √ | √ | √ | √ | √ | √ | Basic     | Foundatio<br>ns of<br>computer<br>networks | CTE02304 |                          |
|   |   | √ | √ | √ | √ | √ | √ | √ | √ | Basic     | Digital<br>signal<br>processing            | CTE02306 |                          |
| √ | √ | √ | √ | √ | √ | √ | √ | √ | √ | assistant | Computer<br>networkin<br>g protocols       | CTE02401 | 4 <sup>th</sup><br>stage |
| √ | √ | √ | √ | √ | √ |   |   | √ | √ | Basic     | TeleCom<br>municatio<br>ns systems         | CTE02403 |                          |

|   |   |   |   |   |   |   |   |   |   |           |                                          |          |  |
|---|---|---|---|---|---|---|---|---|---|-----------|------------------------------------------|----------|--|
|   | √ | √ | √ | √ | √ | √ | √ | √ | √ | Basic     | Security of computers and their networks | CTE02404 |  |
| √ | √ | √ | √ | √ | √ |   |   | √ | √ | Basic     | Media computing                          | CTE02406 |  |
|   | √ | √ | √ | √ | √ | √ | √ | √ | √ | Basic     | Information theory and coding            | CTE02402 |  |
| √ | √ | √ | √ | √ | √ |   |   | √ | √ | assistant | project management                       | CTE02405 |  |
| √ | √ | √ | √ | √ | √ |   |   | √ | √ | Basic     | Project                                  | CTE02308 |  |

**Please check the boxes corresponding to the individual learning outcomes from the program subject to evaluation •**

