

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 2021-2022

University: Al-Kitab University

College:

Number of Departments in the College:

Date of Form Completion:

Dean's Name

Date: / / 2022

*Dean's Assistant for
Scientific Affairs*

Date: / / 2022

*The College Quality Assurance
and University Performance
Manager*

Date: / / 2022

Quality Assurance and University Performance Manager

Date: / / 2022

.Signature

TEMPLATE FOR PROGRAMME SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

PROGRAMME SPECIFICATION

This Programme Specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It is supported by a specification for each course that contributes to the programme.

| | |
|--|---|
| 1. Teaching Institution | Al-Kitab University |
| 2. University Department/Centre | Collage of engineering technology/ Computer Techniques Engineering |
| 3. Title of Final Award | B. Sc. in Computer Engineering Technology (Computer Network Communication) or B. Sc. in Computer Engineering Technology (Computer Electronics). |
| 5. Modes of Attendance offered | yearly |
| 6. Accreditation | ABET |
| 7. Other external influences | ABET |
| 8. Date of production/revision of this specification | 19/1/2022 |
| 9. Aims of the Programmed | |
| 1- Preparing engineering cadres in the field of computer technology engineering in its two branches, computer communications networks and computer electronics, which bear the responsibility of studying the country's need for development and progress and capable of meeting the needs of the labor market in state institutions and industry sectors, and preparing an educated generation armed with science and adopting it as a sound basis for bringing about radical changes and laying Scientific knowledge and the scientific method of thinking and analysis in the service of the country's goals, able to pursue higher studies and adapt to the development of technologies in order to keep pace with the expansion of human needs. | |
| 2- Developing the new generation of engineers, preparing future scientific leaders in the field of computer technology engineering, and working to strengthen the position of Al-Kitab University in general and the Computer Technology Engineering Department in particular. | |

3-Focusing on students and emphasizing their building on strong foundations of scientific knowledge, especially in 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 work in their field and provide quality services to society in various aspects.

4- Providing an appropriate academic environment for study and research to contribute to finding solutions s. to engineering problems using appropriate and appropriate techniques, in addition to actively contributing to deepening and documenting the university's relationship with society through the implementation of advisory work, training and development of teaching and administrative human resources.

10. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and Understanding

A1. 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 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 fields for the purpose of solving industrial problems

B. Subject-specific skills

B1 The ability to apply computer engineering techniques in its two branches, networks and electronics.

B2. Analyzing technical problems and providing appropriate alternatives.

B3. Scientific investigation and evaluation.

Teaching and Learning Methods

There are many methods of teaching and learning used in the Department of Computer Technologies Engineering, Computer Communication Networks Branch and Computer Electronics Branch, and the most important of these methods are (theoretical and practical lectures, discussion and dialogues, field visits to relevant governmental and private institutions, seminars for specific topics, theoretical and practical student research office activities) In addition, in light of the Corona pandemic, he turned to distance learning or e-learning, which is one of the educational means that relies on electronic media to provide knowledge to those who are spread outside the classrooms and to give lessons at their predetermined times, given that colleges and universities were forced to close their doors to protect members of the Teaching, teaching assistants, as well as students, and among its advantages, provides students with distance learning, a safe environment and better communication, as well as a new world of opportunities.

Assessment methods

- 1 Seminar.
- 2- Scientific discussion, oral dialogue, and quarterly and final theoretical and practical examinations.
- 3 - Writing and submitting reports and taking notes on the technical experiences gained in the field visits.

C. Thinking Skills

- C1- Using brainstorming to bring out the creative ideas of some gifted students.
- C2 - Develop research skills on the Internet to broaden the horizon of knowledge
- C 3 -Encouraging the development of engineering thinking for students in memorization and guessing and motivating it towards critical thinking and thinking in a stage before remembering.
- C4- Presenting the engineering or design problem and asking to think about all possible solutions or possible developments

Teaching and Learning Methods

The student's ability to analyze, apply and arrange knowledge so that he can make assumptions and explain as well as describe solutions.

The ability to learn simple and deep in the exploration of knowledge and focus on the application of knowledge to solve existing problems.

Distinguishing that the test increases the student's motivation towards studying and is not a means of punishment for him.

Assessment methods

The branch has relied on clear and high-quality assessment methods and tools for students' learning in order to preserve the quality of the graduate and the scientific reputation of the branch and department. And the quality of the graduate, which constitutes the final product of the educational process, and the most important methods of assessment are:

Objective tests to measure knowledge of engineering facts and their assimilation, application of scientific knowledge in new places, and measure recollection, and that is -

Via the following:-

It is done through the following: - Connectivity Test / Open Questions:-

Questions that have a definite answer.

Questions that do not have a definite answer, which is based on motivating the student to:

A - Objective tests to measure knowledge of engineering facts and their assimilation, application of scientific knowledge in new places, and measure recollection, through the following: - True and False Questions. Multiple choice questions. Interview questions (blank questions). Completion questions.

B- Engineering tests concerning the following matters: Remember facts and figures. Understanding of scientific material and engineering principles. The ability to recall, link and interpret. Apply knowledge in a simple way in interpreting Having the ability to freely answer. Having the ability to organize. Having the ability to organize ideas. - Not to cheat and address it.

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1- Communication and information technology skills and developing strategies for that in the work team. -

D2- Tendency to cooperate and teamwork.

D3- Possess language skills (proficiency in speaking, writing and understanding Arabic and English) in the art of listening and the art of persuasion and dialogue.

D4 - Possess leadership qualities, strong memory, intuitive speed, predictability and relaxation.

Teaching and Learning Methods

This is done by examining students in a theoretical and oral form, classroom, home and laboratory activities / informing them of prior experiences, presenting a problem or issue in a video or workshop, and asking for it to be addressed, improving its performance or developing it, and encouraging note-taking and scheduled comparison.

for example:

A case study (graduation project) in presenting a description that includes scientific facts about an engineering problem and asking students to analyze some information, diagnose the problem and describe the mathematical solution. Stimulating the student's motivation towards the answer and towards studying more

Assessment Methods

Daily Evaluation, Quarterly Evaluation, Practical Evaluation, Final Evaluation, Progressive Presentation, Daily Attendance, and Weekly Reports

| 11. Programme Structure | | | | 12. Awards and Credits |
|--|--------------------------------|---|---------------------------|---|
| Level/Year | Course or Module Code | Course or Module Title | Credit rating | |
| First year | CTE20101 | Democracy and human rights | 2 | Required units = 125 For B. Sc. degree |
| | CTE20102 | Mathematics(I) | 3 | |
| | CTE10103 | ENGINEERING DRAWING | 3 | |
| | CTE10104 | workshops | 4 | |
| | CTE10105 | Electrical engineering fundamentals | 6 | |
| | CTE10106 | Computer organization | 4 | |
| | CTE20107 | Computer programming | 5 | |
| | CTE10108 | Digital electronics | 5 | |
| | CTE10109 | English | 2 | |
| Second year | CTE20201 | computer applications | 3 | |
| | CTE20202 | Mathematics 2 | 3 | |
| | CTE10203 | Microprocessor and Computer Architecture | 5 | |
| | CTE10204 | Instrumentation and measurement | 4 | |
| | CTE10205 | computer programming2 | 4 | |
| | CTE10206 | Communication fundamentals | 5 | |
| | CTE10207 | electronic | 4 | |
| | CTE40208 | training | satisfactory / incomplete | |
| | CTE40209 | English | 2 | |
| Third Communications Networks | CTE20301 | Computer Networks Simulators | 3 | |
| | CTE20302 | Engineering Analysis | 4 | |
| | CTE10303 | Control Engineering Fundamentals | 4 | |
| | CTE10304 | Computer Networks Fundamentals | 4 | |
| | CTE10305 | Real Time Systems Design | 4 | |
| | CTE10306 | Digital Signal Processing (DSP) | 4 | |
| | CTE10307 | Digital Communication | 4 | |
| | CTE10308 | Elective Course | 4 | |
| | CTE10309 | training | | |
| | CTE103010 | English | 2 | |

| | | | |
|--|-----------------|--|----------|
| Fourth Computer Communications Networks | CTE10401 | Computer Networks Protocols | 4 |
| | CTE10402 | Information Theory and Coding | 4 |
| | CTE10403 | Mobile Communication | 4 |
| | CTE10404 | Security of Computer and Networks | 4 |
| | CTE10405 | Project Management | 4 |
| | CTE10406 | Multimedia Computing | 4 |
| | CTE10407 | Elective Course | 4 |
| | CTE10408 | Project | 4 |
| | CTE10409 | English | 2 |

| | | | |
|-----------------------------------|--|-----------------|----------|
| Third Computer Electronics | Electronic Systems Simulators | CTE20301 | 4 |
| | Engineering Analysis | CTE20302 | 4 |
| | Control Engineering Fundamentals | CTE10303 | 4 |
| | Power Electronic | CTE10304 | 4 |
| | Real Time systems Design | CTE10305 | 4 |
| | Digital Signal Processing (DSP) | CTE10306 | 4 |
| | Elective Course (Digital Communication) | CTE10307 | 4 |
| | Digital Controllers | CTE10308 | 4 |
| | Training | CTE10209 | 2 |

| | | | |
|------------------------------------|--|-----------------|----------|
| Fourth Computer Electronics | Computer Networks Protocols | CTE20409 | 4 |
| | Information Theory and Coding | CTE20410 | 4 |
| | Mobile Communication | CTE20411 | 4 |
| | Security of Computer and Networks | CTE20412 | 4 |
| | Project Management | CTE20413 | 4 |
| | Multimedia Computing | CTE20414 | 4 |
| | Elective Course | CTE20415 | 4 |
| | Project | CTE10408 | 4 |
| | English | CTE20416 | 2 |

13. Personal development planning

The focus in the Department of Computer Technology Engineering is on continuous improvement, as the department always seeks to improve the scientific and administrative process and to overcome all difficulties and obstacles that hinder the educational program through the development of human resources for personal development.

The following procedures illustrate the steps implemented or in the process of being implemented in this area:

1. Continuous improvement and development of faculty members through training programs and workshops inside and outside the department, university and country.
2. Increasing extra-curricular activities such as holding scientific conferences and symposia and personal and sports innovations locally, regionally and internationally.
3. Encouraging faculty members to obtain the highest scientific and administrative ranks.
4. Providing sources and modern scientific books for the department's library to keep pace with the rapid progress in engineering sciences.
5. Providing specialized software in computer technology engineering with internet lines for all teacher

14. Admission criteria.

The Department of Computer Technology Engineering is subject to the working mechanism of the Ministry of Higher Education and Scientific Research - Central Admission Department, where graduates of the preparatory school, the scientific branch, are nominated for admission to the department.

15. Key sources of information about the programme

Library / Internet / Websites / Virtual Library

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

| | |
|--|--|
| 1. Teaching Institution | Electrical Engineering Technical College |
| 2. University Department/Centre | Computer Techniques Engineering |
| 3. Course title/code | |
| 4. Programme(s) to which it contributes | Engineering drawing |
| 5. Modes of Attendance offered | yearly |
| 6. Semester/Year | Year |
| 7. Number of hours tuition (total) | 4 |
| 8. Date of production/revision of this specification | 19/1/2022 |
| 9. Aims of the Course | |
| | 1- Prepare of application engineers in the field of electrical and electronic technique engineering. |
| | 2- Graduate Students able to know all parts of different computer, and they can follow its developments. |
| | 3- Training and development of the technical engineering for operation and maintenance of the computer. |
| | 4- Prepare researches and studies to improve and develop the operation of the computer. |

10. Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding

A1- Graduating cadres with a high level of understanding and knowledge capable of building, analyzing and developing computer systems while following up on these cadres after graduation.

A2- The ability to analyze engineering and scientific thinking through the application of laws in science, mathematics and engineering, and to abide by the guidelines and instructions for any effectiveness in the organizational and administrative framework in implementing 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.

A3- The student should be able to speak and write in an effective scientific and engineering style in Arabic and English.

A4- Motivating students to actively participate in the renaissance and progress of society through holding seminars, conferences, continuing education and presenting - Academic consultations in the fields of computer engineering.

A5- The student should be able to produce scientific and applied research in the engineering fields for the purpose of solving industrial and service problems in the field Society

A6- Active participation in the renaissance and progress of society through holding seminars, conferences, continuing education and providing academic consultations in the fields of computer engineering.

B. Subject-specific skills

B1 - The ability to apply computer engineering techniques in its two branches, networks and electronics.

B2 - Analyzing technical problems and providing appropriate alternatives.

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Teaching and Learning Methods

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Assessment methods

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Objective tests to measure knowledge of engineering facts and their assimilation, application of scientific knowledge in new places, and measure recollection, and that is - Via the following:-

True or False Questions.

Multiple choice questions.

Interview questions (blank questions)

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1 Communication and communication skills and communication with the topic of my homeland.

D- 2 tilt and teamwork.

D3- Possession of language skills (proficiency in speaking, writing and understanding the Arabic language and the Arabic star) in the art and art of persuasion and dialogue.

D 4- Possess leadership qualities, memory, intuitive speed, and a susceptibility to ferocious

11. Course Structure

| Week | Hours | ILOs | Unit/Module or Topic Title | Teaching Method | Assessment Method |
|--|----------------|------------------------------------|--|----------------------|-------------------|
| 1 st , 2 nd | Practical (8) | The student understands the lesson | Introduction. | Theory and practical | Direct questions |
| 3 rd | Practical (4) | The student understands the lesson | Lettering. | practical | Direct questions |
| 4 th , 5 th , 6 th | Practical (12) | The student understands the lesson | Geometrical constrictions. | practical | Direct questions |
| 7 th | Practical (4) | The student understands the lesson | Conic sections. | practical | Quiz |
| 8 th , 9 th , 10 th | Practical (12) | The student understands the lesson | Isometric drawing. | practical | Direct questions |
| 11 th , 12 th , 13 th | Practical (12) | The student understands the lesson | Orthogonal projection. | practical | Direct questions |
| 14 th | Practical (4) | The student understands the lesson | Pictorial projection. | practical | Direct questions |
| 15 th | Practical (4) | The student understands the lesson | Sections. | practical | Quiz |
| 16 th , 17 th | Practical (8) | The student understands the lesson | Explanation & drawing of electric board & electronic symbols. | practical | Direct questions |
| 18 th , 19 th , 20 th | Practical (12) | The student understands the lesson | Drawing of electric & electronic board. | practical | Direct questions |
| 21 st , 22 nd , 23 rd | Practical (12) | The student understands the lesson | Integrated circuit drawings. | practical | Direct questions |
| 24 th , 25 th , 26 th | Practical (12) | The student understands the lesson | Drawing of generator connectors. | practical | Direct questions |
| 27 th , 28 th | Practical (8) | The student understands the lesson | Reading different electric & electronic maps. | practical | Direct questions |
| 29 th , 30 th | Practical (8) | The student understands the lesson | Industrial drawing. | practical | Quiz |

| 12. Infrastructure | |
|---|----------------------------|
| Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER | Depending about 60 courses |
| Special requirements (include for example workshops, periodicals, IT software, websites) | All of them are requested |
| Community-based facilities (include for example, guest Lectures , internship , field studies) | All are available |

| 13. Admissions | |
|----------------------------|-----|
| Pre-requisites | |
| Minimum number of students | 60 |
| Maximum number of students | 265 |

