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

University: Diyala
College: Engineering
Number Of Departments in The College: 02
Date Of Form Completion :17/9/2023

Prof. Dr. Anees A. Khadom
The Dean
Date :17/9/2023
Signature

Assist. prof. Dr. Jabbar Q. Jabbar
Dean 's Assistant for Scientific Affairs
Date :17/9/2023
Signature

Assist. prof. Dr. Salah N Farhan
The College Quality Assurance and University Performance Manager
Date :17/9/2023
Signature

Quality Assurance And University Performance Manager Date : / /
Signature

TEMPLATE FOR PROGRAMME SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

PROGRAMME SPECIFICATION

This Program Specification provides a concise summary of the main features of the program 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 program.

1. Teaching Institution	University of Diyala
2. University Department/Centre	College of Engineering
3. Program Title	Electronic Engineering
4. Title of Final Award	BSc in Electronic Engineering
5. Modes of Attendance offered	Courses
6. Accreditation	N/A
7. Other external influences	None
8. Date of production/revision of this specification	17/09/2023
9. Aims of the Program	
• Preparing the student scientifically to work in the field of electronic engineering	
• Build and prepare the student psychologically to play his role as a reliable engineer in this field.	
• Building students capable of competing with other engineers for job opportunities and obtaining the required seats to complete postgraduate studies.	
• Ability to submit to external tests by local, regional or international bodies for the purpose of completing studies or appointment.	
• Urging the student to be creative and think about specialization projects and keep pace with developments in this field.	
• Providing students with scientific, practical and personal skills that enable them to solve practical problems and deal with them using scientific concepts.	

10. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Cognitive goals

A1- Teaching the student the principles of various electrical and electronic networks.

A2- Enabling students to obtain knowledge and understanding in working and designing of electrical networks.

A3- Teaching the student the methods of analysis of electrical networks and its applications.

A4- Enabling students to obtain knowledge and understanding of designing everything related to electrical networks and circuits.

A5- Enabling students to obtain knowledge of electrical networks principles and theories.

A6- Teaching the student the foundations of solving programming problems, computer networks, and communications.

B. The skills goals special to the program.

B1 - Explanation of computer principles topics by specialists in the subject, with an emphasis on the use of mathematics as a basis for understanding and learning.

B2 - Providing them with skills to solve practical problems related to various computer systems and computer programs for addressing and solving technical problems in various fields of computerized work.

Teaching and Learning Methods

- Providing students with the basics and additional topics related to previous educational outcomes and skills to solve practical problems.
- Solving a group of practical examples by the academic staff.
- Students participate during the lecture in solving some practical problems.
- The department's scientific laboratories are monitored by the academic staff.

Assessment methods

- Daily exams with practical and scientific questions.
- Participation marks for difficult competition questions among students.
- Assigning grades to homework assignments and reports assigned to them.
- Monthly exams for the curriculum in addition to the final exam.

C. Affective and value goals

C1- Enabling students to think and analyze topics related to the engineering framework.

C2- Enabling students to think and analyze topics related to electrical systems related to the engineering framework.

C3- Enabling students to think and analyze topics related to solving practical problems.

Teaching and Learning Methods
• Providing students with the basics, additional topics, and field experiences related to the outcomes of thinking and analysis. • Forming discussion circles during or outside lectures to discuss scientific engineering topics that require thinking and analysis. • Asking students, a set of thinking questions during lectures, such as (what, how, when, why) for specific topics. • Giving students homework and periodic reports.
Assessment methods
• Daily exams with practical and scientific questions. • Participation marks for difficult competition questions among students. • Assigning grades to homework assignments and reports assigned to them. • Semester exams for the curriculum in addition to the final exam.

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

D1- Enabling students to write reports and notes on various branches of electronic engineering.

D2- Enabling students to know how to use the Internet to obtain important information.

D3- Raising the student's self-confidence by linking theoretical material to practical reality.

D4- Developing students' skills in how to deal with computer hardware and software problems and how to deal with them.

Teaching and Learning Methods

- Through the Daily lectures by seminar and discussions
- discussion circles during lectures to discuss scientific engineering topics that require thinking and analysis.
- Asking students, a set of thinking questions during lectures, such as (what, how, when, why) for specific topics

Assessment Methods

- Evaluating the seminar and reports that submitted by students and providing them with the necessary feedback to improve their skills and self confidence

11. Program Structure

Level/Year	Course or Module Code	Course or Module Title	Credit rating	
2nd Year-2nd Semester	EE204	Electric Circuits Analysis II		

13. Personal Development Planning
It is planned to develop the students' personalities by holding discussion circles with them and asking them for periodic reports and seminars throughout the four stages and on various topics to develop their personal development.
14. Admission criteria.
According to the rules and regulations of Ministry of Higher Education and Scientific Research.
15. Key sources of information about the program
• College website. • The department's website and contact the department by email.

Curriculum Skills Map																			
please tick in the relevant boxes where individual Programme Learning Outcomes are being assessed																			
				Programme Learning Outcomes															
Year / Level	Course Code	Course Title	Core (C) Title or Option (O**)**	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**
2nd Year-2nd Semester	**EE204**	**Electric Circuits Analysis II**	C	√		√		√		√		√		√	√				

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	University of Diyala
2. University Department/Centre	College of Engineering
3. Course title/code	Electric Circuits Analysis II- EE204
4. Modes of Attendance offered	Class Lectures
5. Semester/Year	1st Semester – 2nd Year
6. Number of hours tuition (total)	30 hours
7. Date of production/revision of this specification	17/09/2023
8. Aims of the Course	
The electric circuits curriculum aims to introduce the student to the skills of electrical networks analysis and their types.	

9· Learning Outcomes, Teaching ,Learning and Assessment Method

A- Cognitive goals.

A1- During the school year, the student learns the basics of electrical networks.

A2- Understanding the basics of electrical networks.

A3- Learn how to think about how a diode works and its applications.

A4- The student learns other types of diodes and applications of electrical networks.

B. The skills goals special to the course.

B1 - Learn how to deal with electrical networks analysis.

B2- Learn about various types of electrical networks.

Teaching and Learning Methods

- The lecturer prepares lectures on the subject in paper and electronic form and presents them to the students.
- The lecturer delivers lectures in detail.
- The lecturer requests periodic reports and homework assignments on the basic topics of the subject.

Assessment methods

- Daily discussion to determine the extent of students' understanding of the material and to evaluate the daily contributions.
- Daily exams with various short scientific questions to understand the extent of their understanding of the material.
- Giving part of the semester's grade to homework assignments.
- Daily exams (Quiz) and monthly exams for the curriculum and the final exam

C. Affective and value goals

C1- Urging the student to understand the purpose of studying the subject in general.

C2- Urging the student to understand the operation of each function or code within the language.

C2- Urging the student to think about how to develop himself in the field of computers.

C4- Making the student able to deal with the calculator and how to use the programs.

Teaching and Learning Methods

- Providing students with the basics, additional topics, and field experiences related to the outcomes of thinking and analysis.
- Forming discussion circles during or outside lectures to discuss scientific engineering topics that require thinking and analysis.
- Asking students, a set of thinking questions during lectures, such as (what, how, when, why) for specific topics.

Assessment methods

- Daily exams with practical and scientific questions.
- Participation marks for difficult competition questions among students.
- Assigning grades to homework assignments and reports assigned to them.
- Semester exams for the curriculum in addition to the final exam.

D. General and rehabilitative transferred skills (other skills relevant to employability and personal development)

D1- Enabling students to write reports on topics related to physics.

D2- Enabling students to know how to use the Internet to obtain important information.

D3- Raising the student's self-confidence by linking theoretical material to practical reality.

D4- Developing students' skills in how to deal with computer hardware and software problems and how to deal with them.

10. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	3	Understanding electric filters	**Electric Filters**	pdf and power point lectures	Daily, monthly exams, homework, and seminars
2	3	Studying various types of filters	**Types of electrical filters**	pdf and power point lectures	Daily, monthly exams, homework, and seminars
3	3	Analysis various types of filters	**analysis of simple passive filters**	pdf and power point lectures	Daily, monthly exams, homework, and seminars
4	3	Understanding transients in electrical networks	**Electric Transients**	pdf and power point lectures	Daily, monthly exams, homework, and seminars
5	3	Studying transient's analysis method of various electric circuits using time domain	**Analysis of RL**	pdf and power point lectures	Daily, monthly exams, homework, and seminars
6	3	Studying transient's analysis method of various	**Analysis of RC**	pdf and power point lectures	Daily, monthly exams, homework, and seminars

		electric circuits using time domain			
7	3	Studying transient's analysis method of various electric circuits using time domain	**Analysis of RLC**	pdf and power point lectures	Daily, monthly exams, homework, and seminars
8	3	Studying transient's analysis method of various electric circuits using Laplace method	**Electric Transients (Laplace Method)**	pdf and power point lectures	Daily, monthly exams, homework, and seminars
9	3	Studying transient's analysis method of various electric circuits using Laplace method	**Applications of laplace transforme in transient analysis**	pdf and power point lectures	Daily, monthly exams, homework, and seminars
10	3	Studying transient's analysis method of various electric circuits using Laplace method	**circuits elements in the S- domain**	pdf and power point lectures	Daily, monthly exams, homework, and seminars
11	3	Studying transient's analysis method of various electric circuits using Laplace method	**laplace equivalent circuits**	pdf and power point lectures	Daily, monthly exams, homework, and seminars
12	3	Understanding Non – Sinusoidal Waves	**Non – Sinusoidal Waves The Fourier series**	pdf and power point lectures	Daily, monthly exams, homework, and seminars
13	3	Studying analysis of circuits with non – sinusoidal waves	**analysis of circuits with non – sinusoidal waves**	pdf and power point lectures	Daily, monthly exams, homework, and seminars
14	3	Studying analysis of circuits with non – sinusoidal	**active power calculations with periodic functions.**	pdf and power point lectures	Daily, monthly exams, homework, and seminars

		waves			
15	3	Studying analysis of circuits with non – sinusoidal waves	**rms value of periodic function**	pdf and power point lectures	Daily, monthly exams, homework, and seminars

11. Infrastructure	
1. Books Required reading:	1- "Fundamentals of Electric Circuits", Charles K. Alexander, Matthew N. O. Sadiku, 5th ed. 2- " ENGINEERING CIRCUIT ANALYSIS ", William H. Hayt, Jack E. Kemmerly, Steven M. Durbin- 8th edition, 2012
2. Main references (sources)	• Lectures presented by the Lecturer • Books available in the college library
A- Recommended books and references (scientific journals, reports…).	
B-Electronic references, Internet sites…	Any other materials available on the web.
12. The development of the curriculum plan	
The Development of the curriculum consists of various practical examples of electrical networks in daily used devices and gadgets	