

**Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department**



Academic Program and Course Description Guide

2024

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

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

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

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

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: Diyala
Faculty/Institute: College of Engineering
Scientific Department: Department of Electrical Power and Machines Engineering
Academic or Professional Program Name: Bachelor
Final Certificate Name: Bachelor of science in Electrical Power and Machines Engineering
Academic System: Course
Description Preparation Date: 13/8/2024
Completion Date: 13/8/2024

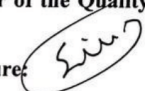
Signature: 

Head of Department Name:
Assit. prof. Dr. Balasim M. Hussein
Date: 13/8/2024

Signature: 

Scientific Associate Name:
Assl. prof. Dr. Jabbar
Date: 13/8/2024



The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Date:
Signature: 


Approval of the Dean

Prof. Dr. Anees A. Khaden

Course description form

1. Course Name
<i>Machines I (DC)</i>
2. Course Code
EP207

3. Semester/Year	
1s't Semester/Second Year	
4. The date this description was prepared	
2023 / 9 / 17	
5. Available forms of attendance	
Face-to-Face theoretical lectures	
6. Number of study hours (total) / number of units (total)	
60/3	
7. Name of the course administrator	
Name: Lect. Mayyadah Sahib Ibrahim Email: mayyadah.sahib@uodiyala.edu.iq	
8. Course objectives	
Objectives of the study subject	<p>Study the basic principles of DC machines.</p> <p>Qualifying students to be able to become familiar with the theoretical and scientific aspects of direct current machines</p> <p>Study the types of direct current machines, their types, working principles, properties and applications, and explain the importance of their uses in practical life.</p> <p>Urging students to benefit from the course in their field of work as engineers in the field of electrical power engineering in the future</p>
9. Solution of non-linear equations and root findings.	
The Strategy	<p>Weekly lectures included providing students with the basics and topics related to the pre-skills education outcomes to solve practical problems through presentation, lecture, or conducting experiments.</p>

	<p>Solve a group of practical and applied examples by faculty members.</p> <p>Through discussion, students participate in solving some practical problems.</p> <p>Practical laboratories in the department are monitored by faculty members in the department</p>
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10. Numerical integration and differentiation.

Week	Hours	Name of the unit or topic	Required learning outcomes	Learning method	Interpolation and solving differential equations.
Week 1 to Week 2	6	The student learns an introduction to Construction of D-C machine	Construction of D-C machines	Lectures Notes PDF power point Video	Daily, oral, monthly, written examinations and reports
Week 3 to Week 5	10	The student learns E.m.f equation, electromagnetic torque, armature reaction, practical commutations problems and their minimization	E.m.f equation, electromagnetic torque, armature reaction, practical commutations problems and their minimization	Lectures Notes PDF power point Video	Daily, oral, monthly, written examinations and reports
Week 6 to Week 8	10	The student learns Type of excitation of DC generators. Characteristics of D.C. Generators	Type of excitation of DC generators. Characteristics of D.C. Generators	Lectures Notes PDF power point Video	Daily, oral, monthly, written examinations and reports
Week 9 to Week 10	10	The student learns Type of excitation of DC generators. Characteristics of D.C. Generators	Loss in a D.C. Generator and efficiency Condition for Maximum Efficiency	Lectures Notes PDF power point Video	Daily, oral, monthly, written examinations and reports

Week 11 to Week 14	10	The student learns Parallel Operation of Shunt Generators Connecting Shunt Generators in Parallel	Parallel Operation of Shunt Generators Connecting Shunt Generators in Parallel	Lectures Notes PDF power point Video	Daily, oral, monthly, written examinations and reports
Week 15	4	The student learns Type of excitation of DC motors , -Losses and Efficiency maximum power	Type of excitation of DC motors , -Losses and Efficiency maximum power -condition for maximum <i>efficiency</i>	Lectures Notes PDF power point Video	Daily, oral, monthly, written examinations and reports

11. Course Evaluation

Distribution of the grade out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written exams, reports, etc.

12. Learning and teaching resources

Required textbooks (methodology, if any)	Electrical Technology By B.L Theraja.
Main references (sources)	1.Principle of Electrical Machines Machines V.K. MEHTA 2. Electrical Machines U.A. Bakshi V.U. kIBakshi
Recommended supporting books and references (scientific journals, reports....)	All scientific journals that are relevant to the broad concept of DC machines
Electronic references, Internet sites	Peruse scientific websites for recent developments in the prescribed article