

Ministry of Higher Education and Scientific
Research

Scientific Supervision and Evaluation
Authority

Department of Quality Assurance and
Academic Accreditation



2024

Academic Program Description

University Name: Al-Furat Al-Awsat Technical University
College/Institute: Technical Collage of Al-Mussaib
Scientific Department: Department Electrical Engineering Techniques
Academic or Professional Program Name: Bachelor's Degree
Final Degree Name: Bachelor of Science in Electrical Engineering Techniques
Study System: Annual
Description Preparation Date:
File Filling Date: 19/2/2024

Signature:

Department Head Name:

Dr. Muhammed Salah Sadiq Al-Kafaji

Date: /4/2024

ا. د نبييل حميد عبد المجيد
معاون العميد للنتنننن العلمية
و الدراسات العليا

Signature:

Scientific Assistant Name:

Prof. Dr. Nabil Hamid Abdul Majeed

Date: / / 2024

File Verified By:

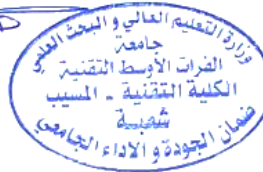
Quality Assurance and University Performance Department

Quality Assurance and University Performance Department Director Name: Dr.

Haider Rahman Dawood

Date: / / 2024

Signature



Dean's Approval

Description of the academic program

This academic program description provides a necessary summary of the most important characteristics of the program and the learning outcomes expected of the student to achieve, demonstrating whether he or she has made the most of the available opportunities.

1.Educational institution	Al-Furat Al-Awsat Technical University	
2. Department	Electrical Engineering Techniques	
3. Academic program	Electrical Engineering Techniques	
4. Academic program Degree	B.Sc. degree in Electrical Engineering Techniques	
5. Academic program type	Bologna process 1st year 2023- 2024	Annual 2nd ,3rd , and 4th class
6. Other external influences	Practical and scientific field visits.	
7. Accredited accreditation program	ministry of higher education and scientific research	
8.Other external influences	Non	
9.Date the description was prepared	2024	
10. Objectives of the academic program		
The program aims to qualify graduates familiar with scientific and practical electrical engineering applications, develop appropriate solutions to the technical engineering problems facing them in their field of work, and prepare qualified		

technical cadres to work in the labor market in electrical engineering specializations.

11.Required program outputs

1. Installing, operating and maintaining electrical energy equipment and devices in generation, distribution and transmission.
2. Contributing to the operation and maintenance of production plants.
3. Involved in working in maintenance workshops for electrical equipment and motors.
4. Acquiring the skill of working on a computer and learning specialized engineering programming languages.
5. Conducting important electrical checks for wires, insulators, and electrical transformers.
6. Engineering project management.

12.Teaching, learning and evaluation methods

Blended learning (in-person and electronic) through the following:
 Scientific films, practical laboratories, computer simulation programs, summer and curricular training, seminars, and graduation projects.
 Evaluation methods are different, including daily, monthly, semester, and final exams

12. Teaching staff

Academic Rank	Specialization		Number of the teaching staff	
	General	Special	staff	Lecturer
Prof.	Electric Eng.	1 power eng. 1electronic eng.	/	
Asist.Prof.	Electric Eng.	3-power eng. 5-electronic and comm.eng.	/	
Lec.	-Electric Eng. -Physics -computer sience	6-electric eng. 3-general physics 1-computer sience	/	
Asist.lec.	Electric Eng.	7-power eng.	/	

13. Program Vision

The Department is ongoing with the development of the curriculum in line with

the latest scientific developments in the field of electrical engineering, in addition to completing the requirements of the scientific laboratories in the department. seek to raise the teaching staff and create the appropriate conditions for scientific research in order to obtain the scientific degrees required to be able to compete competently and distinguish with similar sections only local, Arab or international.

14. Program Mission

Preparing highly qualified graduates with excellent education that combines deep knowledge and basic skills. Graduates excel as engineers and leader's in their profession, and have the potential to pursue lifelong learning, basic research, applied research and public service.

15. program Objectives

The Department aims to prepare qualified technical engineering staff to work in power generation and transmission stations and to operate and maintain the electrical and electronic equipment attached to these stations.

16. Program structure



Republic of Iraq - Ministry of Higher Education and Scientific Research
 Al-furat Al-awsat Technical University
 Bachelor's degree in Electrical Engineering Techniques (First cycle)
 Four years (Eight semesters) - 240 ECTS credits - 1 ECTS = 30 hr
 Program Curriculum (2023 - 2024)

Level	Semester	No.	Module Code	Module Name in English	اسم المادة التدريسية	Language	CL (hr/w) Lect (hr/w)		
							CL (hr/w)	Lect (hr/w)	
UGI	One	1	ATU23011	DC Electrical Circuits	دوائر التيار المستمر	English	3		
		2	ATU23012	Digital Technologies	التقنيات الرقمية	English	3		
		3	ATU23013	Engineering Drawing	الرسم الهندسي	English			
		4	ATU23014	Differential Mathematics	الرياضيات التفاضلية	English	2		
		5	ATU23015	Engineering Workshops	الورش الهندسية	English			
		6	ATU23016	English Language (Beginner)	اللغة الانكليزية (مستوى ادا)	English	2	1	
	Total							10	1
	Two	Two	1	ATU23021	Engineering Mechanics	الميكانيك الهندسي	English	3	
			2	ATU23022	Human Rights and Democracy	حقوق الانسان والديمقراطية	Arabic	2	1
			3	ATU23023	Arabic Language	اللغة العربية	Arabic	2	1
			4	ATU23024	AC Electrical Circuits	دوائر التيار المتردد	English	3	
			5	ATU23025	Integral Mathematics	الرياضيات التكاملية	English	2	
			6	ATU23026	Computer Principles	اساسات الحاسوب	English	2	
			Total						
UGII	Three	1	ATU23031	DC Generators	مولدات التيار المستمر	English	2		
		2	ATU23032	Electronic Essentials	اساسيات الالكتر ونيات	English	3		
		3	ATU23033	Electrical Circuit Analysis	تحليل الدوائر الكهربائية	English	3		
		4	ATU23034	Sensors	المتحسسات	English	2		
		5	ATU23035	Applied Mathematics	الرياضيات التطبيقية	English	2		
		6	ATU23036	Computer Applications	تطبيقات الحاسوب	English	2		
	Total							14	0
	Four	Four	1	ATU23041	DC Motors	محركات التيار المستمر	English	3	
			2	ATU23042	Electronic Circuits	الدوائر الكهرونية	English	3	
			3	ATU23043	Advanced Electrical Circuits	تحليل الدوائر الكهربائية	English	3	
			4	ATU23044	Instruments and	الأجهزة والقياسات	English	3	
			5	ATU23045	Engineering Analysis	التحليلات الهندسية	English	3	
			6	ATU23046	English Language	اللغة الانكليزية (مستوى)	English	2	1
			Total						
UGIII	Five	1	ATU23051	Principles of Power Engineering	مبادئ هندسة القدرة	English	3		
		2	ATU23052	DC Power Conversions	مغيرات القدرة المستمرة	English	3		
		3	ATU23053	Electrical Transformers and	المحولت الكهربائية والمكاثر	English	3		
		4	ATU23054	Electromagnetic Fields	المجالات الكهرومغناطسية	English	3	1	
		5	ATU23055	Microprocessor	المعالج الدقيقة	English	3		
		6	ATU23056	Numerical Analysis	التحليلات العددية	English	3		
	Total							18	1
	Six	Six	1	ATU23061	Advanced Power Engineering	هندسة القدرة المتقدم	English	3	
			2	ATU23062	AC Power Conversions	مغيرات القدرة المتناوبة	English	3	
			3	ATU23063	Synchronous and Special	المكاثر التزامنية والخاصة	English	4	
			4	ATU23064	Digital Controllers	المسطررات الرقمية	English	4	
			5	ATU23065	English Language (Advanced)	اللغة الانكليزية (مستوى)	English	2	1
			6	ATU23066	Elective 1	مادة اختيارية 1	English	2	
			Total						

Level	Semester	No.	Module Code	Module Name in English	اسم المادة التدريسية	Language			
							CL (hr/w)	Lect (hr/w)	
UGIV	Seven	1	ATU23071	Transmission and Distribution	أنظمة التوزيع والنقل	English	3		
		2	ATU23072	Electric Machine Drives	مسيوقات المكائن الكهربائية	English	3		
		3	ATU23073	Power Systems Analysis	تحليل أنظمة القدرة	English	3		
		4	ATU23074	Electric Power Generation	محطات توليد القدرة	English	3		
		5	ATU23075	Control Systems Analysis	تحليل أنظمة السيطرة	English	4		
		6	ATU23076	Project 1	مشروع 1	English		1	
	Total							16	1
	UGIV	Eight	1	ATU23081	Professional Ethics	اخلاقيات المهنة	Arabic	2	1
			2	ATU23082	Power System Protection	حماية أنظمة القدرة	English	4	
			3	ATU23083	Stability of Power Systems	استقرارية أنظمة القدرة	English	4	
			4	ATU23084	High Voltage Techniques	تقنيات الضغط العالي	English	3	
			5	ATU23085	Project 2	مشروع 2	English		1
6			ATU23086	Elective 2	مادة اختيارية 2	English	3		
Total							16	2	
Total							125	9	
Level	Semester	No.	Module Code	Module Name in English	اسم المادة الاختيارية	Language			
							CL (hr/w)	Lect (hr/w)	
UGIII	Six	1	ATU23066	Communication Systems	أنظمة الاتصالات	English	2		
		2	ATU23066	Digital Signal Processing	معالج الإشارة الدقيقة	English	2		
UGIV	Eight	3	ATU23086	Modeling and Simulation	النمذجة والمحاكاة	English	3		
		4	ATU23086	Modern Control Systems	أنظمة السيطرة المتقدمة	English	3		
		5	ATU23086	Sustainable Energy	الطاقات المتجددة	English	3		
		6	ATU23086	Industrial Management	الإدارة الصناعية والسلامة	English	3		
Note: The student should complete 4 weeks of Summer Intern									
Structured SWL (hr/w) type	CL	Class Lecture			Module type	B	Basic learni		
	Lab	Laboratory				C	Core learni		
	Pr	Practical Training				S	Support or		
	Tut	Tutorial				E	Elective lea		
	Lect	Online lecture				Note: Columns O, Q an			
	Semn	Seminar				Note: The summer trai			