نموذج وصف البرنامج الاكاديمي

اسم الجامعة : تكريت

الكلية: الهندسة

القسم العلمي: الهندسة الكهربائية

اسم البرنامج الاكاديمي او المهني: بكالوريوس هندسة كهربائية

اسم الشهادة النهائية: بكالوريوس علوم في الهندسة الكهربائية

النظام الدراسي: فصول دراسية

تاريخ اعداد الوصف : 2025/1/12

تاريخ مليء الملف: 2025/1/12

التوقيع

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التاريخ: ١٢/١/٢٠٢٥

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دقق الملف من قبل

شعبة ضمان الجودة و الاداء الجامعي

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التاريخ: ١٢/١/٢٠٢٥

التوقيع

١٢/١/٢٠٢٥

مصادقة السيد العميد

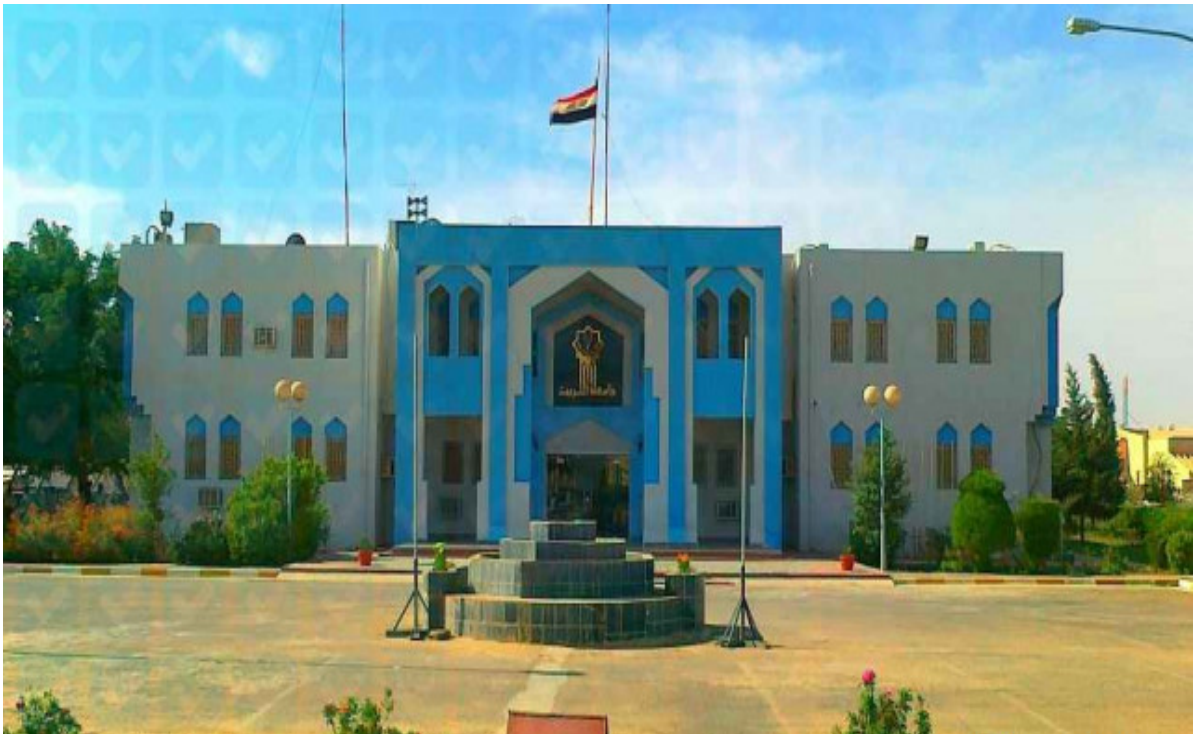
الاستاذ المساعد الدكتور

سعد رمضان احمد

عميد كلية الهندسة

TIKRIT UNIVERSITY
جامعة تكريت

Bachelor of Science Electrical Engineering (B.Sc.)
بكالوريوس علوم - هندسة كهربائية



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1. Mission & Vision Statement

Vision Statement

Our vision is to be a renowned center of excellence in electrical engineering education, research, and innovation. We strive to cultivate a vibrant learning environment that nurtures creativity, critical thinking, and technical expertise among our students. Our aim is to empower future electrical engineers with a comprehensive understanding of cutting-edge technologies and equip them with the skills to address the evolving challenges of the industry. Through collaborative research endeavors and industry partnerships, we aspire to contribute to the advancement of electrical engineering knowledge and foster technological advancements that positively impact society. With a commitment to excellence, integrity, and social responsibility, our department aims to shape visionary leaders and contribute significantly to the sustainable development and growth of the electrical engineering field in Iraq and beyond.

Mission Statement

Our mission is to provide a comprehensive and transformative educational experience for our students. We are committed to delivering high-quality, industry-relevant curricula that foster creativity, technical proficiency, and ethical practices. By nurturing a conducive learning environment and employing innovative teaching methodologies, we aim to equip

our students with the necessary skills and knowledge to address contemporary challenges in electrical engineering. We are dedicated to conducting impactful research, promoting interdisciplinary collaborations, and facilitating technology transfer to address the needs of the local community and industries. We strive to instill a culture of lifelong learning, professional growth, and societal responsibility among our students and faculty, thereby contributing to the sustainable development of Iraq's electrical engineering sector.

2. Program Specification

Program code:	BSc-EE	**ECTS**	240
Duration:	4 levels, 8 Semesters	**Method of Attendance:**	Full Time

Electrical Engineering includes several disciplines. Computer and control systems, communication and electronics, and power and machines. The curriculum of our program support the students through four levels gain them the required knowledge either for industrial sector or for next level to specialized in one on these field in master and doctorate degrees.

In level 1, students acquire knowledge of the essentials of Electrical and basic Engineering knowledge. In levels 2 through 4, students will gain a specific core topics in Electrical Engineering subjects. In level 4, student practice research through the graduation project, in which student required to demonstrate a real-life problem-solving contribution.

3. Program Goals

1. Academic Excellence: The Electrical Engineering Department aims to provide a rigorous and comprehensive academic program that meets international standards, ensuring graduates possess a deep understanding of electrical engineering principles and practices.
2. Professional Competence: The department strives to equip students with the technical knowledge, practical skills, and problem-solving abilities necessary for

successful careers in various electrical engineering fields, enabling them to contribute effectively to industry, research, and innovation.

3. Research and Innovation: The department promotes a culture of research and innovation by engaging students and faculty in cutting-edge research projects, encouraging collaboration with industries, and contributing to the advancement of electrical engineering knowledge and technology.
4. Ethical and Professional Values: The department emphasizes the importance of ethical behavior, professional responsibility, and social awareness among its students, cultivating a sense of integrity, leadership, and commitment to sustainable development.
5. Industry Relevance: The department maintains close ties with industries, regularly updating the curriculum to align with industry needs, fostering industrial collaborations, and providing students with practical exposure to real-world engineering challenges.

4. Student Learning Outcomes

1. An ability to identify, formulate, and solve engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply the engineering design process to produce solutions that meet specified needs with consideration for public health and safety, and global, cultural, social, environmental, economic, and other factors as appropriate to the discipline.
3. An ability to develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions.
4. An ability to communicate effectively with a range of audiences.
5. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
6. An ability to recognize the ongoing need to acquire new knowledge, to choose appropriate learning strategies, and to apply this knowledge.

7. An ability to function effectively as a member or leader of a team that establishes goals, plans task, meets deadlines, and creates a collaborative and inclusive environment.

5. Academic Staff

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6. Credits, Grading and GPA

Credits

Tikrit University is following the Bologna Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is 240, 30 ECTS per semester. 1 ECTS is equivalent to 25 student workload, including structured and unstructured workload.

Grading

Before the evaluation, the results are divided into two subgroups: pass and fail. Therefore, the results are independent of the students who failed a course. The grading system is defined as follows:

GRADING SCHEME مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				
NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

Calculation of the Grade Point Average (GPA)

1. The GPA is calculated by the summation of each module score multiplied by its ECTS, all are divided by the program total ECTS.

   GPA of a 4-year B.Sc. degrees:

GPA = [(1st module score x ECTS) + (2nd module score x ECTS) + ...] / 240

7. Curriculum/Modules

Semester 1 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ELEC-111	DC Electrical Circuit	102	98	8.00	C	None
MATH-101	Calculus 1	73	52	5.00	B	None
ELEC-105	Electronics Physics	73	77	6.00	C	None
ENG-104	Computer Science	60	40	4.00	B	None
ENG106	Workshop Skills	73	52	5.00	B	None

ENG108	English Language	30	20	2.00	S	None
ELEC-112	Democracy and Human Rights	30	20	2.00	S	None

Semester 2 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ELEC-121	AC Electrical Circuit	102	73	7.00	C	ELEC-111
MATH-102	Calculus 2	73	52	5.00	B	MATH-101
ENG-102	Engineering Mechanics	59	41	4.00	C	
ELEC-122	Digital Techniques	74	51	5.00	C	ELEC-112
ENG-105	Computer programming	60	40	4.00	B	ENG-104
ENG-101	Engineering Drawing	31	44	3.00	B	
ENG-113	Arabic Language	31	19	2.00	S	

Semester 3 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MATH-201	Engineering Analysis	73	52	5.00	B	MATH-102
ELEC-215	Electrical Measurement	59	66	5.00	C	ELEC-214
ELEC-217	Electric Fields	59	66	5.00	C	ELEC-127
ELEC-214	Basic of Electronics	74	51	5.00	C	ELEC-127
ELEC-213	Arithmetic Programming	60	40	4.00	C	ENG-105
ELEC-212	Logic Circuits	60	40	4.00	C	
ENG-114	Ba'ath Party Crimes	33	17	2.00	S	

Semester 4 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ELEC-221	Engineering Mathematics	59	66	5.00	B	MATH-201
ELEC-226	DC Machines and transformers	116	84	8.00	C	ELEC-216

ELEC-227	Magnetic Fields	59	66	5.00	C	ELEC-217
ELEC-224	Fundamental of Electronic Devices	74	51	5.00	C	ELEC-214
ELEC-225	Electrical Network	87	88	7.00	C	ELEC-121

Semester 5 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ELEC-316	Analog Communications	74	51	5.00	C	ELEC-227
ELEC-313	Three phase induction motors	88	62	6.00	C	ELEC-226
ELEC-314	Entrance of Electrical Power	73	52	5.00	C	ELEC-225
ELEC-311	Analogy Electronics	74	51	5.00	C	ELEC-224
ELEC-317	Basic Computer Engineering	74	51	5.00	C	ELEC-213
MATH-301	Numerical Analysis	45	55	4.00	B	MATH-201

Semester 6 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ELEC-326	Digital Communications	74	51	5.00	C	ELEC-E316
ELEC-323	Single phase and synchronous machines	88	62	6.00	C	ELEC-313
ELEC-324	Advance of Electrical Power	73	52	5.00	C	ELEC-314
ELEC-321	Digital Electronics	74	51	5.00	C	ELEC-311
ELEC-327	Advance Computer Engineering	74	51	5.00	C	ELEC-317
MATH-302	Engineering Statistics and Probability	45	55	4.00	B	

Semester 7 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ELEC-411	Digital Signal Processing	74	51	5.00	C	ELEC-356

ELEC-413	Digital system Design	87	88	7.00	C	ELEC-356
ELEC-414	Power Systems Analysis	59	66	5.00	C	ELEC-354
ELEC-415	Control Systems	74	51	5.00	C	MATH-201
ELEC-418	Computer Network	45	55	4.00	E	ELEC-327
ENG-407	Graduation Project1	44	56	4.00	B	

Semester 8 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ELEC-421	Information Theory	74	51	5.00	C	ELEC-411
ELEC-422	Power Electronics	116	84	8.00	C	ELEC-412
ELEC-424	Power Protection	45	55	4.00	C	ELEC-414
ELEC-425	Advance Engineering Control	74	51	5.00	C	ELEC-415
ELEC-428	Antenna and Propagation	45	55	4.00	E	ELEC-326
ENG-427	Graduation Project1	44	56	4.00	B	Grad. Proj.1

8. Contact

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