

وزارة التعليم العالي والبحث
جهاز الاشراف والتقويم العلمي
دائرة ضمان الجودة والاعتماد الأكاديمي

استمارة وصف البرنامج الأكاديمي للكليات والمعاهد

الجامعة: تكريت
المعهد / الكلية: هندسة الشرقاط
تاريخ ملئ الملف: 2024/9/10

التوقيع
اسم المعاون العلمي
م.د. علاء يوسف علي
التاريخ: 2024/9/10

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التوقيع
دققت من قبل مدير شعبة ضمان الجودة
والاداء الجامعي
م.م. عبدالله عيسى صبح
التاريخ: 2024/9/10

مصادقة السيد العميد

أ.د. خميس خلف حسن

٢٠٢٤/٩/١٠

خميس خلف حسن
جامعة تكريت - كلية هندسة الشرقاط

Tikrit University

جامعة تكريت
كلية هندسة الشرقاط



First Cycle – Bachelor's degree (B.Sc.) – Mechanical Engineering

بكالوريوس هندسة ميكانيكية



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1. Mission & Vision Statement

Vision Statement

The Department of Engineering will provide programs of the highest quality to produce globally competent engineers who can address challenges of the millennium to achieve sustainable socio-economic development. Our vision is to be innovators in electrical engineering education and research to spearhead sustainable and environment-friendly economic development.

Mission Statement

The Mission of the Bachelor of Mechanical Engineering Programme is to inculcate students with essential knowledge, skills and values required for sustainable design, development and innovation in the field of mechanical engineering for socio-economic growth and enabling them for lifelong learning to contribute towards interdisciplinary engineering solutions.

2. Program Specification

Programmer code:	BSc-ME	ECTS	240
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Duration:	4 levels, 8 Semesters	Method of Attendance:	Full Time
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The Mechanical Engineering program provides a foundation for work in the fields of mechanics, design, heat transfer. Topics specific to Mechanical Engineering are studied in specialized focus areas in the third and fourth levels.

At level 1, students will develop their essential mathematical and analytical skills and knowledge by studying four core modules: Engineering Math, Basic of Electrical Engineering, Computer programming. Students contextualize and develop their learning further through the following modules, Electronic physics, Engineering mechanics, Engineering Drawings and other basic learning modules. Where possible and appropriate, students are encouraged to draw upon their learning and experience in the workplace to contextualize their learning.

3. Program Goals

The aim of the Mechanical Engineering Program is to train students who are willing to become Engineers to become sound in the field. The trained students should be confident, self-reliant and be able to execute what they have learnt and strive to be the best among equals and to be able to do this independently. Other goals are:

1. To produce graduates in Mechanical Engineering who are registerable with professional bodies and have a burning desire to excel in their chosen profession.
2. To provide a comprehensive education in Mechanical engineering that stresses scientific reasoning and problem solving across the spectrum of disciplines within electrical power system.
3. To prepare students for a wide variety of post-baccalaureate paths, including graduate school, professional training programs, or entry level jobs in any area of electrical engineering.
4. To provide extensive hands-on training in electronic technology, statistical analysis, laboratory skills, and field techniques
5. To provide thorough training in written and oral communication of scientific information.

4. Student Learning Outcomes

Student Learning Outcomes describe the knowledge, skills and dispositions that students have learned from completing the Engineering Technology program. Each student learning outcome is mapped to a program education objective, which prepares graduates to attain the program educational objectives within a few years of graduation.

Outcome 1

Students will be able to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly defined engineering technology activities.

Outcome 2

Students will be able to select and apply principles of mathematics, science, engineering, and technology to engineering technology problems that require the application of principles and applied procedures or methodologies.

Outcome 3

Students will be able to conduct standard tests and measurements; to conduct, analyze, and interpret experiments; and to apply experimental results to improve processes.

Outcome 4

Students will be able to design systems, components, or processes for broadly-defined engineering technology problems appropriate to program educational objectives.

Outcome 5

Students will be able to function effectively as a member or leader on a technical team.

Outcome 6

Students will be able to identify, analyze, and solve broadly-defined engineering technology problems.

Outcome 7

Students will be able to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.

Outcome 8

Students will be able to recognize the need for engage in lifelong learning to maintain and enhance their knowledge of the discipline.

Outcome 9

Students will be able to identify contemporary issues encountered in the engineering technology profession related to diversity and the impact of technology decision on a global society.

Outcome 10

Students will be able to explain the ethical and professional responsibilities associated with the practice of engineering technology.

Outcome 11

Students will be able to demonstrate the importance of quality, timeliness and continuous improvement to the field of engineering technology.

5. Academic Staff

الايمل	Orcid	رابط كوكل سكولر	رابط صفحة سكوبس	الشهادة	الاسم الثلاثي بالانكليزي	الاسم الثلاثي بالعربي	ت
Abdullateef.aljad@tu.edu.iq	orcid.org/0000-0001-9546-8746		https://www.scopus.com/authid/detail.uri?authorId=56971319500	دكتوراه	Prof.Dr. Abdullateef Ahmed Jadallah	أ.د. عبد اللطيف احمد جاد الله	1
Ahmdaljasm1970@gmail.com	http://orcid.org/0009-0009-0427-9882	Ahmed Jasim	Ahmed Jasim	ماجستير	Ahmed Jasim Shihab	احمد جاسم شهاب	2
Aseockq.abdullah@gmail.com	http://orcid.org/0009-0002-3184-273x	Abdulla Issa	Abdulla Issa	ماجستير	Abdullah issa subh	عبدالله عيسى صبح	3
nawras.adday21@tu.edu.iq	https://orcid.org/0009-0004-7851-2978	Nawres Basheer Google Scholar	Nawras Adai	ماجستير	Nawras Basheer Adday	نورس بشير عداي	4
mubarak@tu.edu.iq	https://orcid.org/0000-0002-4368-5594	Mubarak Oglah	Mubarak Oglah	دكتوراه	Mubarak hamad oglah	مبارك حمد عكلة	5
		Ahmed Kais	Ahmed Kais	دكتوراه	Ahmed Kais Abdulla	احمد قيس عبدالله	6
		Muhanad Kamel	Muhanad Kamel	دكتوراه	Muhanad Kamel	مهند كامل	7
		Ahmed hasan	Ahmed hasan	ماجستير	Ahmed hasan gazalat	احمد حسن غزالات	8
		Harith Ali	Harith Ali	دكتوراه	Harith Abdulla Ali	حارث عبدالله علي	9
		Abdulrazak Muhammed Salih	Abdulrazak Muhammed Salih	دكتوراه	Abdulrazak Muhammed Salih	عبدالرزاق محمد صالح	10

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 hrs 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	راسب - قيد المعالجة	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				
Number 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 Cumulative Grade Point Average (CGPA)

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

CGPA of a 4-year B.Sc. degree:

$$CGPA = [(1st^{th} module score \times ECTS) + (2nd^{th} module score \times ECTS) +] / 240$$

Republic of Iraq- Ministry of Higher Education and Scientific Research												جمهورية العراق – وزارة التعليم العالي والبحث العلمي							
Tikrit University - College of Engineering - Al-Shirqat												جامعة تكريت - كلية الهندسة الشرقاط							
Bachelor's in Mechanical Engineering (First cycle)												درجة البكالوريوس في الهندسة الميكانيكية (الدورة الأولى)							
Four years (Eight semesters) - 240 ECTS credits - 1 ECTS = 25hr												أربع سنوات (ثمان فصول دراسية) - ٢٤٠ وحدة اوروبية كل وحدة اوروبية = ٢٥ ساعة							
Program Curriculum (2023 - 2024)												المناهج الدراسي للعام (٢٠٢٣-٢٠٢٤)							
Lev .	Se m.	N o	Code	Module Name	اسم المادة الدراسية	Lang uage	SSWL (hr/w)						Ex am	SS WL hr/s em	USS WL hr/se m	SW L hr/s em	EC TS	Mod ule Typ e	Prereq uisite Module (s) Code
							C L	Le ct	L ab	P r	T ut	Se mn							
UG I	On e	1	TKSHM E1100	Calculus I	الرياضيات I	Englis h	4	Lectures Compensation			2		3	93	57	150	6	B	
		2	TKSHM E1101	Engineering Work shop	الورش هندسيّة	Englis h	2			2		1	3	64	86	150	6	B	
		3	TKSHM E1102	Computer Science	علم الحاسوب	Englis h	2		2			1	3	64	11	75	3	S	
		4	TKSHM E1103	Engineering Drawing	الرسم الهندسي	Englis h	2		4				3	93	57	150	6	B	
		5	TKSHM E1104	Engineering Mechanics - Statics	ميكانيك هندسي – سكّون	Englis h	2				2	1	3	64	61	125	5	B	
		6	TKSHM E1105	Human Rights and Democracy	ديمقراطية وحقوق إنسان	Arabi c	2						3	33	17	50	2	S	
		7	TKSHM E1106	Arabic	عربي	Arabi c	2						3	33	17	50	2	S	
		Total							14		5	2	4		21	444	306	750	30
							26												
	Se m.	N o	Code	Module Name	اسم المادة الدراسية	Lang uage	SSWL (hr/w)						Ex am	SS WL hr/s em	USS WL hr/se m	SW L hr/s em	EC TS	Mod ule Typ e	Prereq uisite Module (s) Code
	C L	Le ct	L ab	P r	T ut	Se mn													
	T wo	1	TKSHM E1200	Calculus II	الرياضيات ٢	Englis h	4	Lectures Compensation			1		3	78	72	150	6	B	MATH -101
		2	TKSHM E1201	English Language 1	لغة إنكليزية ١	Englis h	2						3	33	17	50	2	S	
		3	TKSHM E1202	Mechanical Drawing	رسم ميكانيكي	Englis h	2		3				3	78	72	150	6	C	ENG-101
		4	TKSHM E1203	Manufacturing Processes 1	عمليات تصنيع ١	Englis h	2		1				4	49	76	125	5	C	
		5	TKSHM E1204	Thermodynamics	ديناميك الحرارة	Englis h	2		1		1		4	64	61	125	5	B	
		6	TKSHM E1205	Electrical Engineering	هندسة كهربائية	Englis h	2		1		1		4	64	86	150	6	S	
		Total							14		6		3		24	366	384	750	30
							25												
Lev .	Se m.	N o	Code	Module Name	اسم المادة الدراسية	Lang uage	SSWL (hr/w)						Ex am	SS WL hr/s em	USS WL hr/se m	SW L hr/s em	EC TS	Mod ule Typ e	Prereq uisite Module (s) Code
C L	Le ct	L ab	P r	T ut	Se mn														
UG II	On e	1	TKSHM E2100	Engineering Analysis	تحليلات هندسيّة	Englis h	4	Lectures Compensation			1		3	78	47	125	5	B	MATH -102

		2	TKSHM E2101	Metallurgical Engineering	هندسة المعادن	English	2		1		1		4	64	61	125	5	C		
		3	TKSHM E2102	Fluid Mechanics 1	ميكانيك الموائع ١	English	2		1		1		4	64	61	125	5	B		
		4	TKSHM E2103	Computer Programing	برمجة الحاسوب	English	2		2				4	64	11	75	3	S		
		5	TKSHM E2104	Strength of Materials 1	مقاومة المواد ١	English	2		1		1		4	64	61	125	5	C	ENG-102	
		6	TKSHM E2105	Engineering Mechanics-Particle dynamics	ميكانيك هندسي - حركة جسيمات	English	3				1		3	63	62	125	5	B	ENG-102	
		7	TKSHM E2106	The Crimes of Baath Regime in Iraq	جرائم نظام البعث في العراق	Arabic	2						3	33	17	50	2	S		
		Total							17		5		5		25	430	320	750	30	
		25																		
		Se m.	N o	Code	Module Name	اسم المادة الدراسية	Lang uage	SSWL (hr/w)						Ex am	SS WL hr/s em	USS WL hr/se m	SW L hr/s em	EC TS	Mod ule Typ e	Prereq uisite Module (s) Code
								C L	Le ct	L ab	P r	T ut	Se mn							
T wo		1	TKSHM E2200	English Language 2	لغة إنكليزية ٢	English	2	Lectures Compensation						3	33	17	50	2	S	
		2	TKSHM E2201	Engineering Mechanics - rigid dynamics	ميكانيك هندسي - حركة الاجسام الجامدة	English	2					1		3	63	87	150	6	C	MECH-205
		3	TKSHM E2202	Strength of Materials 2	مقاومة مواد ٢	English	2					1		4	64	86	150	6	C	MECH-203
		4	TKSHM E2203	Fluid Mechanics 2	ميكانيك الموائع ٢	English	2					1		4	64	86	150	6	C	MECH-201
		5	TKSHM E2204	Applied Thermodynamics	ديناميك الحرارة التطبيق في	English	2					1		4	64	86	150	6	C	MECH-101
		6	TKSHM E2205	Computer Aided Drawing	رسم معان بالاحاسوب	English	1					3		4	64	36	100	4	C	ENG-101
		Total						11		7		4		22	352	398	750	30		
		22																		
Lev .	Se m.	N o	Code	Module Name	اسم المادة الدراسية	Lang uage	SSWL (hr/w)						Ex am	SS WL hr/s em	USS WL hr/se m	SW L hr/s em	EC TS	Mod ule Typ e	Prereq uisite Module (s) Code	
							C L	Le ct	L ab	P r	T ut	Se mn								
UG III	One	1	TKSHM E3100	Numerical Analysis	طرق عددية	English	2	Lectures Compensation	1					4	48	52	100	4	B	MATH-201
		2	TKSHM E3101	Engineering Management and Ethics	الادارة والاخلا في الهندسية	English	2					1		3	48	52	100	4	S	
		TKSHM E3102																		

UG IV		3	TKSHM E3103	Theory of Machines	نظرية مكانن	Englis h	3		1		1		4	79	71	150	6	C	MECH -205	
		4	TKSHM E3104	Heat Transfer conduction	انتقال حرارة – توصيل	Englis h	2		1		1		4	64	86	150	6	C		
		5	TKSHM E3105	Gas Dynamic	ديناميك غازات	Englis h	2		1		1		4	64	61	125	5	C	MECH -101 MECH -201	
		6	TKSHM E3106	Manufacturing Processes 2	عمليات تصنيع ٢	Englis h	2		1		1		4	64	61	125	5	C	MECH -103	
		Total						13		5		5		23	368	382	750	30		
								23												
		Se m.	N o	Code	Module Name	اسم المادة الدراسية	Lang uage	SSWL (hr/w)						Ex am	SS WL hr/s em	USS WL hr/se m	SW L hr/s em	EC TS	Mod ule Typ e	Prereq uisite Module (s) Code
	T wo	1	TKSHM E3200	Statistics and probability	احصاء واحتمالية	Arabi c	2	Lectures Compensation			1		3	48	27	75	3	S		
		2	TKSHM E3201	Machine Design 1	تصميم مكانن ١	Englis h	2		1		1		4	64	86	150	6	C	MECH -207	
		3	TKSHM E3202	Heat Transfer (convection & radiation)	انتقال حرارة – حمل واشعاع	Englis h	2		1		1		4	64	86	150	6	C		
		4	TKSHM E3203	Internal Combustion Engines	مكانن احتراق	Englis h	2		1		1		4	64	86	150	6	C	MECH -209	
		5	TKSHM E3204	Engineering Materials	مواد هندسية	Englis h	2				1		3	48	77	125	5	C	MECH -204	
		6	TKSHM E3205	Energy Conversion	تحويل طاقة	Englis h	2				1		3	48	52	100	4	C	MECH -101 MECH -201	
		Total						12		4		6		21	336	414	750	30		
							22													
	Lev .	Se m.	N o	Code	Module Name	اسم المادة الدراسية	Lang uage	SSWL (hr/w)						Ex am	SS WL hr/s em	USS WL hr/se m	SW L hr/s em	EC TS	Mod ule Typ e	Prereq uisite Module (s) Code
		On e	1	TKSHM E4100	Engineering Graduation Project I	مشروع تخرج ١	Englis h	2	Lectures Compensation					3	33	67	100	4	C	
			2	TKSHM E3201	Mechanical Design 2	تصميم مكانن ٢	Englis h	2		1		1		4	64	86	150	6	C	MECH -306
			3	TKSHM E3202	Vibration 1	اهتزازات ١	Englis h	2		1		1		4	64	61	125	5	B	MECH -206
			4	TKSHM E3203	Control 1	سيطرة ١	Englis h	2		1		1		4	64	61	125	5	B	MATH -301
			5	TKSHM E3204	Principles of Air Conditioning	مبادئ تكييف الهواء	Englis h	2		1		1		4	64	61	125	5	C	MECH -101 MECH -201
			TKSHM E3205																	
			6	TKSHM E3206	Power Plant Engineering	هندسة محطات قدرة	Englis h	2			1		3	48	77	125	5	C	MECH -209	
		Total						12		4		5		22	337	413	750	30		
							21													
	Se m.	N o	Code	Module Name	اسم المادة	Lang uage	SSWL (hr/w)						Ex am	SS WL	USS WL	SW L	EC TS	Mod ule	Prereq uisite	

					الدراسة ية		C L	Le ct	L ab	P r	T ut	Se mn		hr/s em	hr/se m	hr/s em		Typ e	Module (s) Code
T wo	1	TKSHM E4200	Engineerin g Graduation Project II	مشرو ع تخرج ٢	Englis h	2	Lectures Compensation						3	33	67	100	4	C	
	2	TKSHM E4201	Control 2	سيطرة ٢	Englis h	2		1		1		4	64	61	125	5	C	MECH -404	
	3	TKSHM E4202	Heating, Ventilation and Air Conditioni ng (HVAC)	أنظمة التدفئة والتهوي ية والتكي يف) HVA (C)	Englis h	2		1		1		4	64	86	150	6	C	MECH -101	
		TKSHM E4203																MECH -201	
	4	TKSHM E4204	Vibration 2	اهتزازا ت ٢	Englis h	2		1		1		4	64	61	125	5	C	MECH -403	
	5	TKSHM E4205	Electrical Machines	مكائن كهربا ئية	Englis h	2		1		1		4	64	61	125	5	S		
	6	TKSHM E4206	Industrial Engineerin g	هندسة صناع ية	Englis h	3				1		3	63	62	125	5	C		
	Total							1 3		4		5		22	352	398	750	30	
	22																		
Structured SWL (hr/w) type			CL	Class Lecture	Module Type				B	Basic Learn Activity					Student Workload				
			Lect	Online Lecture					C	Core Learn Activity					Structured SWL				
			Lab	Laboratory					S	Support Learn Activity					Unstructured SWL				
			Pr	Practical Training					E	Elective Learn Activity									
			Tut	Tutorial															
			Semn	Seminar															

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