

Tikrit UNIVERSITY

جامعة تكريت



Bachelor of Science in Environmental Engineering

بكالوريوس علوم - هندسة بيئة



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1. Mission & Vision Statement

Vision Statement

The department's goal is to provide a nationally renowned undergraduate program in environmental engineering with research air, soil, and water pollution, the impact of biological pollution, wastewater treatment, and solid waste managements.

Mission Statement

1. Educate future leaders and innovators in environmental engineering and related disciplines to become successful career environmental engineers.
2. By engaging in academic research, environmental engineering knowledge is expanded.
3. To meet social demands, develop technology.
4. Through involvement in environmental engineering and related fields, we will advance the welfare of the Iraqi population.

2. Program Specifications

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

The Environmental Engineering program offered by Tikrit University are designed to assist you in acquiring the academic foundation required for a career as a professional engineer in the industrial, consultancy, and academic fields. You will develop the knowledge and abilities necessary to meet the challenges of industry and research in the twenty-first century, including those relating to the design, air pollution, water and soil pollution, wastewater treatment systems etc., you will also gain the understanding necessary to work at the intersection of engineering and the environmental sciences. The variety of units and alternatives available emphasize the flexibility of the subject of environmental engineering and your capacity to gradually narrow the scope of your study.

3. Program Goals

After graduating, our students will succeed in their career by:

1. Prepare men and women to be successful as Environmental Engineers.
2. Participate in service projects, find innovative and effective solutions to environmental problems faced by institutions, and provide environmental consulting that emphasizes societal advantages of engineering concepts.
3. Be able to pursue graduate studies and dedicate to continuing professional growth and long-life learning through bridging engineering and non-engineering professions.

4. Student Learning Outcomes

1. Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. Communicate effectively with a range of audiences
4. 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.
5. Function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. Develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. Acquire and apply new knowledge as needed, using appropriate learning strategies.

5. Academic Staff

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6. Credits, Grading and GPA

Credits

Tikrit University follows Bologna Learning 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)

- 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:

$$\text{GPA} = [(1\text{st module score} \times \text{ECTS}) + (2\text{nd module score} \times \text{ECTS}) + \dots] / 240$$

7. Curriculum/Modules

Semester 1 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
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MATH-101	Calculus I	78	72	6	B	
ENG-102	Engineering Mechanics	63	62	5	B	
ENG-104	Computer Science	63	12	3	B	
ENG-101	Engineering Drawing	93	57	6	S	
ENVR-ENG-101	Environmental Chemistry	78	72	6	C	
ENG-108	Human Rights and Democracy	33	17	2	S	
ENG-113	Arabic Language	33	17	2	S	

Semester 2 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MATH-102	Calculus II	78	72	6	B	MATH-101
ENVR-ENG-102	Strength of Materials	78	72	6	B	ENG-102
ENVR-ENG-103	Environmental physics	48	52	4	C	
ENVR-ENG-104	Analytical Chemistry	78	72	6	C	
ENG-106	Engineering Workshops	78	72	6	S	
ENG-107	English Language I	33	17	2	S	

Semester 3 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MATH-201	Engineering Analysis	78	72	6	B	MATH-102
ENVR-ENG-201	Thermodynamics	48	52	4	S	
ENVR-ENG-202	Fundamentals of Fluid Mechanics	93	57	6	C	
ENG-105	Computer Programing	48	27	3	S	ENG-104
ENVR-ENG-203	Engineering Surveying	78	72	6	S	
ENVR-ENG-204	Engineering Ethics	33	42	3	S	
ENG-114	The Crimes of the Baath Regime in Iraq	33	17	2	S	

Semester 4 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ENVR-ENG-205	Environmental Geology	48	27	3	C	
ENVR-ENG-206	Water Supply Engineering	78	72	6	C	

ENVR-ENG-207	Fluid Flow	93	57	6	C	ENVR-ENG-202
ENVR-ENG-208	Environmental Microbiology	78	72	6	C	
ENVR-ENG-209	Air Quality Engineering	48	52	4	C	ENVR-ENG-101
ENVR-ENG-210	Noise Pollution	48	27	3	C	
ENG-109	English Language II	33	17	2	S	ENG-107

Semester 5 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
MATH-301	Numerical Analysis	48	52	4	B	
ENVR-ENG-301	Fundamentals of Wastewater	78	72	6	C	ENVR-ENG-208
ENVR-ENG-302	Solid Waste Management	63	62	5	C	
ENVR-ENG-303	Treatment Plant Hydraulics	63	62	5	C	ENVR-ENG-207
ENVR-ENG-304	Water Quality Engineering	63	87	6	C	
ENVR-ENG-305	Heat Transfer	48	52	4	C	

Semester 6 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ENVR-ENG-306	Soil and Groundwater Pollution	93	82	7	C	ENVR-ENG-205
ENVR-ENG-307	Wastewater Treatment	63	87	6	C	ENVR-ENG-301
ENVR-ENG-308	Hazardous & Radioactive Waste Management	48	52	4	C	ENVR-ENG-302
MATH-302	Statistics and Probability	48	52	4	B	
ENVR-ENG-309	Mass Transfer	48	52	4	C	
ENVR-ENG-310	Engineering Hydrology	63	62	5	C	

Semester 7 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ENVR-ENG-401	Estimating and Engineering Specification	48	52	4	S	

ENVR-ENG-402	Water Reuse	63	62	5	C	ENVR-ENG-301
ENVR-ENG-403	Engineering Management	48	52	4	C	
ENVR-ENG-404	Simplified Wastewater Treatment Systems	63	87	6	C	ENVR-ENG-307
ENVR-ENG-405	Sludge Treatment	63	62	5	C	ENVR-ENG-307
ENVR-ENG-406	Graduation Project I	63	87	6	C	

Semester 8 | 30 ECTS

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
ENVR-ENG-407	Engineering Economic	48	52	4	C	ENVR-ENG-403
ENVR-ENG-408	Industrial Waste Management	63	62	5	C	
ENVR-ENG-409	Water and Sanitary Networks	63	87	6	C	ENVR-ENG-207+ ENVR-ENG-310
ENVR-ENG-410	Remote Sensing and GIS	63	62	5	S	
ENVR-ENG-411	Environmental Sustainability	48	52	4	C	
ENVR-ENG-412	Graduation Project II	63	87	6	C	ENVR-ENG-406

8. Contact

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