

# University of Mosul

## جامعة الموصل



*First Cycle – Bachelor's degree (B.Sc.) – Environmental sciences*

بكالوريوس علوم بيئة - علوم بيئة



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### 1. Mission & Vision Statement

#### *Vision Statement*

The department strives to create a scientific and educational environment that attracts outstanding students who are passionate about the field and its programs. The aim is to equip them with essential scientific skills and values to become successful individuals in their personal and professional lives, and to instill in them a sense of national responsibility by applying their specialization to serve the community and the labor market. Furthermore, the department seeks to graduate students who contribute to environmental preservation for the well-being of society..

#### *Mission Statement*

The department is committed to enhancing scientific awareness by offering opportunities throughout the environmentalist's academic journey and social engagement. The mission focuses on developing the graduate's personal skills to sustain and improve key environmental elements—air, water, and soil—which are vital components of daily life. The department also aims to prepare a generation well-equipped with top-tier environmental science programs, supported by a broad scientific foundation to provide learning and practical experience opportunities. Additionally, it prepares students to be valuable contributors to society and the workforce, capable of facing challenges and fulfilling their responsibilities as productive members of the community.

The department emphasizes that graduates should achieve the goals of sustainable development within the country, aspiring to make Nineveh and other Iraqi cities among the best regions globally—both for current and future generations—while also preserving biodiversity

## **Program Specification .2**

<b>Programme code:</b>	BSc-ENVSCI	<b>ECTS</b>	240
<b>Duration:</b>	4 levels, 8 Semesters	<b>Method of Attendance:</b>	Full Time

### About the Department of Environmental Sciences

The Department of Environmental Sciences carries out its academic activities through teaching specialized courses and overseeing related subjects. In addition, it conducts research in various fields of environmental sciences and contributes to the supervision and instruction of postgraduate students in the university's college departments by the department's faculty members.

## **Program Objectives .3**

1. To provide a comprehensive education in biology that stresses scientific reasoning and problem solving across the spectrum of disciplines within biology
2. 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 biology
3. To provide extensive hands-on training in electronic technology, statistical analysis, laboratory skills, and field techniques
4. To provide thorough training in written and oral communication of scientific information
5. To enrich students with opportunities for alternative education in the area of biology through undergraduate research, internships, and study-abroad

## **Student Learning Outcomes .4**

### **Environmental Sciences Department Overview**

Environmental Science is the interdisciplinary study of the natural world and the complex interactions between biological, physical, and human systems. The department provides students with a comprehensive understanding of environmental processes at local, regional, and global scales, focusing on issues such as pollution, sustainability, resource management, and ecosystem dynamics.

Graduates acquire knowledge of the scientific, technical, historical, and societal aspects of environmental issues and apply this knowledge to develop solutions that promote environmental stewardship and sustainability. The department offers a Bachelor of Science in Environmental Sciences with concentrations in General Environmental Science; Environmental Health and Policy; and Environmental Monitoring and Technology. A minor in Environmental Education is also available, supporting teacher licensure in public instruction.

In addition, the department offers courses to students from a wide range of disciplines and provides foundational instruction for pre-professional and graduate programs. The curriculum is designed to prepare students for careers in environmental consulting, regulatory agencies, sustainability planning, research, education, and graduate or professional studies.

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## **Program Learning Outcomes**

### **Outcome 1 – Systems Thinking**

Graduates will be able to identify and analyze complex interactions among environmental, biological, chemical, and human systems, and explain how they influence one another within natural ecosystems.

### **Outcome 2 – Communication of Scientific Information**

Graduates will be able to effectively communicate environmental data, concepts, and research findings through both oral presentations and written scientific reports.

### **Outcome 3 – Field and Laboratory Proficiency**

Graduates will be able to conduct environmental fieldwork and laboratory analysis using scientific instruments, environmental sampling methods, and computer technologies while following appropriate safety and ethical standards.

### **Outcome 4 – Scientific Literacy**

Graduates will demonstrate an understanding of how environmental knowledge evolves, including the historical development of environmental science and its influence on policy and public awareness.

### **Outcome 5 – Data Collection and Analysis**

Graduates will be able to apply quantitative and qualitative methods to collect, analyze, and interpret environmental data to support scientific conclusions and policy decisions.

### **Outcome 6 – Critical Thinking and Problem Solving**

Graduates will be able to design and execute environmental research projects or sustainability plans by applying critical thinking and evidence-based decision-making to address real-world environmental challenges.

## 5. Academic Staff

ت	اسم التدريسي	اللقب العلمي	الاختصاص العام	الاختصاص الدقيق	H-index
1	أ.د. محمد ابراهيم خليل	أستاذ / رئيس القسم	علوم حياة	بايولوجي جزيئي	3
2	م. بلال سالم داود	مدرس/ مقرر القسم	تقانة احيائية	تقانة احيائية	3
3	أ.م.د. مازن نزار فضل	أستاذ مساعد	علوم حياة	بيئة وتلوث	3
4	أ.م.د. احمد نوري محمود	أستاذ مساعد	علوم فيزياء الحالة الصلبة	علوم المواد	2
5	أ.م.د. ايمن محمد جبر	أستاذ مساعد	طب بيطري	صحة عامة بيطرية	2
6	أ.م.د. رواء محمود داود	أستاذ مساعد	علوم حياة	بيئة الاحياء المجهرية	2
7	م.د. محمد وليد سعيد	مدرس/ معاون العميد	علوم ارض	رسوبيات	1
8	م.د. أنسام احمد سعدون	مدرس	علوم حياة	علم النبات	لا يوجد
9	م.د. فائق خليل ابراهيم	مدرس	علوم حياة	علم النبات	لا يوجد
10	م.د. نور ميسر صادق	مدرس	علوم حياة	علوم حياة	لا يوجد
11	م.د. سهير منير داود	مدرس	علوم كيمياء	كيمياء فيزيائية- عضوية	1
12	م.د. ايناس حازم حميد	مدرس	علوم الارض	متحجرات و طباقية	لا يوجد
13	م.د. احمد رياض احمد	مدرس	علوم بيئة	طاقة متجددة	3
14	م.د. مروة نزار عبد الفتاح	مدرس	علوم كيمياء	كيمياء فيزيائية	3
15	م. مشعل علي محمد	مدرس/مقرر دراسات	علوم حياة	نبات- فطريات	1
16	م.م. أياد محمد خلف	مدرس مساعد	علوم حياة	علوم حياة	لا يوجد
17	م.م. سعد محمد حسن	مدرس مساعد	علوم بيئية	علوم بيئية	لا يوجد
18	م.م. فنار نايف جردو	مدرس مساعد	علوم رياضيات	رياضيات حاسوبية	2
19	م.م. سارة بسام إدريس	مدرس مساعد	علوم بيئية	علوم بيئية	1
20	م.م. أسر حسان عبد الله	مدرس مساعد	علوم كيمياء	كيمياء حيائية	1
21	م.م. سهى سعد علي	مدرس مساعد	علوم كيمياء	كيمياء فيزيائية	لا يوجد
22	م.م. امنة باسل محمد	مدرس مساعد	علوم بيئية	علوم بيئية	لا يوجد
23	م.م. محمد نذير ذنون	مدرس مساعد	علوم زراعية- وقاية نبات	امراض النبات	لا يوجد
24	م.م. سفيان هشام عبد الرحمن	مدرس مساعد	علوم بيئية	علوم بيئية	2
25	م.م. حسام الدين ذنون علي	مدرس مساعد	علوم زراعية	علوم التربة وموارد مائية	لا يوجد
26	م.م. نور عبد الغني صالح	مدرس مساعد	علوم بيئية	علوم حياة- بيئة	2
27	م.م. دعاء زياد محمد	مدرس مساعد	ادارة واقتصاد	علوم مالية ومصرفية	لا يوجد
28	م.م. مثني وعد محمد	مدرس مساعد	علوم بيئية	علوم بيئية	لا يوجد
29	م.م. سنا ربيع قاسم	مدرس مساعد	علوم بيئية	علوم بيئية	لا يوجد

## Credits, Grading and GPA .6

### Credits

Mosul 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)

- 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 ENVSCI degree:

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

**Semester 1 | 30 ECTS | 1 ECTS = 25 hrs**

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Env101	General Physics	78	72	6.00	B	
Env102	General Biology	93	72	6.60	B	
Env103	General Geology	63	72	5.40	B	
Env104	Organic Chemistry	93	72	6.60	B	
Uom105	Arabic Language	33	72	4.20	S	
Uom106	Freedom and Democracy	33	72	4.20	S	

**Semester 2 | 30 ECTS | 1 ECTS = 25 hrs**

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Env107	Biostatistics	78	72	6.00	C	
Env108	Analytical Chemistry	93	82	7.00	B	
Env109	Soil Science	63	37	5.00	B	
Env110	Ecology	63	87	7.00	C	
Uom111	English Language	48	52	2.00	S	
Uom112	Computer	33	42	3.00	S	

**Semester 3 | 30 ECTS | 1 ECTS = 25 hrs**

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Env201	Genetics	63	62	5.00	B	
Env202	Plant Environment	78	72	5.00	C	
Env203	Environmental Geology	63	62	4.00	C	
Env204	Pollution Fundamentals	78	72	5.00	C	
Env205	Environmental Chemistry	93	57	5.00	C	
Env206	Environmental Legislation and Law	33	17	2.00	C	

Env207	Arabic language	33	17	2.00	C	
Env208	A I Baath party crimes	33	17	2.00	C	

**Semester 4 | 30 ECTS | 1 ECTS = 25 hrs**

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Env207	Microbial Environment	63	62	5.00	C	
Env208	Plant Taxonomy	78	72	6.00	C	
Env209	Biochemistry	63	37	4.00	B	
Env210	Climatology	48	52	4.00	C	
Env211	Animals Taxonomy	52	48	4.00	C	
Env212	Enviromental Impact Assessment	48	27	3.00	C	
Env213	English Language	33	17	2.00	S	
Env214	Computer	33	42	3.00	S	

**Semester 5 | 30 ECTS | 1 ECTS = 25 hrs**

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Env301	Air pollution	78	47	5.00	C	
Env302	Aquatic Ecology	78	72	6.00	C	
Env303	Animal Ecology	78	72	6.00	C	
Env304	Biodiversity	78	72	6.00	C	
Env305	Ecological Physiology	63	62	5.00	C	
Env306	Environmental Tecchnology	33	17	2.00	C	

**Semester 6 | 30 ECTS | 1 ECTS = 25 hrs**

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Env307	Molecular Biology	63	27	3.60	C	



Env308	Water Pollution	78	72	6.00	C	
Env309	Insects	78	72	6.00	B	
Env310	Soil pollution	78	72	6.00	C	
Env311	phycology	78	47	5.00	B	
Env312	Radioactive Pollution	33	52	3.40	C	

**Semester 7 | 30 ECTS | 1 ECTS = 25 hrs**

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Env401	Graduation project	78	97	7.00	C	
Env402	Sustainable Development	78	97	7.00	C	
Env403	Remote Sensing	78	72	6.00	C	
Env404	Environmental Health	48	77	5.00	C	
Env405	Renewable Energy	63	62	5.00	C	

**Semester 8 | 30 ECTS | 1 ECTS = 25 hrs**

Code	Module	SSWL	USSWL	ECTS	Type	Pre-request
Env407	Graduation project	78	97	7.00	C	
Env408	Green Chemistry	78	97	7.00	C	
Env409	Epidemiology	78	72	6.00	C	
Env410	Planning and Environmental Management	48	77	5.00	C	
Env411	Toxicology	63	62	5.00	C	

## 8. Contact

Program Manager:

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