



Academic Program Description

University Name: Mosul

Faculty/Institute: The Environmental Sciences College

Scientific Department: Environmental Science

Academic or Professional Program Name: Bachelor's Environmental Science

Academic System:

Description Preparation Date: 1/10/2024

File Completion Date: 1/10/2024

Signature:

Head of Department Name:

Prof. Dr. Mohammad Ibrahim Khalil

Date: 1 / 10 / 2025

Signature:

Scientific Associate Name:

Dr, Mohammad Waleed

Date: 1/10/2024

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date:

Signature:

Dr. Muthana Jasim Altaee

Approval of the Dean

1. Program Vision

The department seeks to work on developing a distinct personality for the student by developing cultural and social awareness, which qualifies him after graduation to contribute effectively to serving his community.

2. Program Mission

1. Qualifying students of the Department of Environmental Sciences to know information related to the environment, enabling the graduate to employ this knowledge in the field of life
2. Developing students' knowledge and expanding their horizons of thinking by encouraging them to scientific research to obtain the greatest amount of information for application in the field of the environment.
3. The ability to determine environmental factors and the extent of their impact on human health and their surroundings.
4. The ability to identify abnormal deviations in the levels and nature of standards used to determine environmental conditions

3. Program Objectives

- 1- Using new concepts in the field of the environment and using electronic devices to detect defects and try to address them
2. Direct access to the problems facing the environment through expanding field visits to places where pollutants are present

كلية العلوم البيئية
قسم علوم البيئة
رسمي

4. Program Accreditation

1. Qualifying the department's students to be familiar with the theoretical and practical aspects of a number of sciences, including life sciences, soil, air, and water, as well as the ability to deal with modern technologies used in the environmental field, ensuring a highly accurate database for environmentalists to deal with the environment.
2. Researching recent topics and identifying problems that need more in-depth scientific research.

5. Other external influences

not exist

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	46	46		Basic Course
College Requirements	yes			
Department Requirements	yes			
Summer Training	yes			
Other				

* This can include notes whether the course is basic or optional.

كلية العلوم البيئية
قسم علوم البيئة
(رسمي)

7. Program Description				
Year/Level	Course Code	Course Name	Credit Hours	
2023-2024/ 1st / 1st course	Env101	General Physics	theoretical	practical
2023-2024/ 1st / 1st course	Env102	General Biology	theoretical	practical
2023-2024/ 1st / 1st course	Env103	General Geology	theoretical	practical
2023-2024/ 1st / 1st course	Env104	Organic Chemistry	theoretical	practical
2023-2024/ 1st / 1st course	Env105	Arabic Language	theoretical	
2023-2024/ 1st / 1st course	Env106	Freedom & Democracy	theoretical	
2023-2024/ 1st /2nd course	Env107	Biostatistics	theoretical	practical
2023-2024/ 1st /2nd course	Env108	Analytical Chemistry	theoretical	practical
2023-2024/ 1st /2nd course	Env109	Soil Science	theoretical	practical
2023-2024/ 1st /2nd course	Env110	Ecology	theoretical	practical
2023-2024/ 1st /2nd course	Env111	English Language	theoretical	
2023-2024/ 1st /2nd course	Env112	Computer	theoretical	practical
2023-2024/ 2nd / 1st course	Env201	Genetics	theoretical	practical
2023-2024/ 2nd / 1st course	Env202	Plant Ecology	theoretical	practical
2023-2024/ 2nd / 1st course	Env203	Principle of pollution	theoretical	practical
2023-2024/ 2nd / 1st course	Env204	Environmental Chemistry	theoretical	practical
2023-2024/ 2nd / 1st course	Env205	Environmental Geology	theoretical	practical

Year/Level	Course Code	Course Name	Credit Hours	
2023-2024/ 2nd / 1st course	Env206	Environmental Systems and Rules	theoretical	
2023-2024/ 2nd /2nd course	Env207	Environmental Microbiology	theoretical	practical
2023-2024/ 2nd /2nd course	Env208	Plant Taxonomy	theoretical	practical
2023-2024/ 2nd /2nd course	Env209	Animal Taxonomy	theoretical	practical
2023-2024/ 2nd /2nd course	Env210	Climatology	theoretical	
2023-2024/ 2nd /2nd course	Env211	Freedom and Democracy	theoretical	
2023-2024/ 2nd /2nd course	Env212	Biochemistry	theoretical	Practical
2023-2024/ 3rd /1st course	Env301	Air Pollution	theoretical	
2023-2024/ 3rd /1st course	Env302	Aquatic environment	theoretical	practical
2023-2024/ 3rd /1st course	Env303	Animal Environment	theoretical	practical
2023-2024/ 3rd /1st course	Env304	Biodiversity	theoretical	practical
2023-2024/ 3rd /1st course	Env305	Environmental Physiology	theoretical	
2023-2024/ 3rd /1st course	Env306	Environmental Technology	theoretical	
2023-2024/ 3rd /2nd course	Env307	Water Pollution	theoretical	practical
2023-2024/ 3rd /2nd course	Env308	Molecular Biology	theoretical	practical
2023-2024/ 3rd /2nd course	Env309	Entomology	theoretical	practical
2023-2024/ 3rd /2nd course	Env310	Soil Pollution	theoretical	practical
2023-2024/ 3rd /2nd course	Env311	Phycology	theoretical	

Year/Level	Course Code	Course Name	Credit Hours	
2023-2024/ 3rd /2nd course	Env312	radioactive pollution	theoretical	practical
2023-2024/ 4th /1st course	Env401	graduation project	theoretical	practical
2023-2024/ 4th /1st course	Env402	sustainable development	theoretical	
2023-2024/ 4th /1st course	Env403	Remote sensation	theoretical	
2023-2024/ 4th /1st course	Env404	Environmental Health	theoretical	
2023-2024/ 4th /1st course	Env405	Renewable energy	theoretical	
2023-2024/ 4th /2nd course	Env407	graduation project	theoretical	Practical
2023-2024/ 4th /2nd course	Env408	Green Chemistry	theoretical	
2023-2024/ 4th /2nd course	Env409	Epidemiology	theoretical	practical
2023-2024/ 4th /2nd course	Env410	Environmental planning and management	theoretical	
2023-2024/ 4th /2nd course	Env411	Environmental economics	theoretical	

8. Expected learning outcomes of the program

Knowledge

Learning Outcomes 1	Learning Outcomes Statement 1 1. Qualifying students of the Department of Environmental Sciences to know information related to the environment, enabling the graduate to employ this knowledge in the field of life 2. Developing students' knowledge and expanding their horizons of thinking by encouraging them to
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	scientific research to obtain the greatest amount of information for application in the field of the environment.
Skills	
Learning Outcomes 2	Learning Outcomes Statement 2 1. The ability to identify abnormal deviations in the levels and nature of standards used to determine environmental conditions. 2- The ability to determine environmental factors and the extent of their impact on human health and its surroundings.
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
Learning Outcomes 4	Learning Outcomes Statement 4 1. Developing students' abilities to share ideas 2. Urge them to find solutions and share them
Learning Outcomes 5	Learning Outcomes Statement 5

9. Teaching and Learning Strategies

1. Providing students with the basics and additional topics related to the previous learning outcomes of skills, to solve practical problems
2. Applying the topics studied theoretically at the practical level in various laboratories affiliated with the environmental departments
3. Visiting practical laboratories by academic staff
4. Sending students for training in relevant state departments in order to gain experiences that simulate reality

10. Evaluation methods

1. Daily exams
2. Semester and final exams.
3. Participation scores for discussion questions for academic topics.
4. Grades for homework
5. Submitting and discussing reports

11. Faculty**Faculty Members**

Academic Rank	Specialization		Special Requirements/Skills (if applicable)	Number of the teaching staff	
	General	Special		Staff	Lecturer
Professor	Biology	Molecular biology		Staff	
Assistant Professor	Biology	Environmental Pollution		Staff	
Assistant Professor	Physics	Materials science		Staff	
Assistant Professor	Veterinary medicine	Veterinary public health		Staff	
Assistant Professor	Biology	Biochemistry		Staff	
Lecture	Biology	Environmental Pollution		Staff	
Lecture	Biology	Environmental Microbiology		Staff	
Lecture	Biology	Plant		Staff	

Lecture	Biology	Biology		Staff	
Lecture	Biology	Biotechnology		Staff	
Lecture	Geology	Fossils and stratigraphy		Staff	
Lecture	Chemistry	chemophysical		Staff	
Lecture	Computer	computer		Staff	
Lecture	Geology	Sediments		Staff	
Lecture	Chemistry	chemophysical		Staff	
Lecture	Biology	Botany		Staff	

Professional Development

Mentoring new faculty members

Professional development for faculty members and new teachers through holding workshops and courses on a regular basis

Professional development of faculty members

1. Developing students' abilities in research and investigation by asking students to write scientific reports and recent discussion sessions, as well as urging students to consult sources, books, and magazines as a source of information.
2. Enabling students to prepare models that include various materials related to the environment
3. Enabling students to pass job interviews.
4. Enabling students to diagnose the causes of environmental degradation.
5. Enabling students to continue self-development after graduation

12. Acceptance Criterion

Central/according to the requirements of the Ministry of Higher Education and Scientific Research

13. The most important sources of information about the program

1. The central library in the college.
2. Internet information network.
3. Experiences of Arab and international universities.
4. Current curricula

14. Program Development Plan

- 1- Using new concepts in the field of the environment and using electronic devices to detect defects and try to address them
2. Direct access to the problems facing the environment through expanding field visits to places where pollutants are present

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First Year First Semester	Env101	General Physics	Basic	√											
	Env102	General Biology	Basic	√				√				√			
	Env103	General Geology	Basic	√					√				√		
	Env104	Organic Chemistry	Basic	√				√				√			
	Env105	Arabic Language	Basic			√					√				√
	Env106	Freedom & Democracy	Basic			√					√				√
First Year Second Semester	Env107	Biostatistics	Basic	√					√				√		
	Env108	Analytical Chemistry	Basic	√					√			√			
	Env109	Soil Science	Basic	√						√				√	
	Env110	Ecology	Basic	√				√				√			
	Env111	English Language	Basic				√			√				√	
	Env112	Computer	Basic	√					√				√		
Second Year First Semester	Env201	Genetics	Basic	√				√					√		
	Env202	Plant Ecology	Basic	√					√				√		
	Env203	Principle of pollution	Basic	√				√					√		

	Env204	Environmental Chemistry	Basic	√				√				√			
	Env205	Environmental Geology	Basic		√				√				√		
	Env206	Environmental Systems and Rules	Basic	√				√				√			
Second Year Second Semester	Env207	Environmental Microbiology	Basic		√				√					√	
	Env208	Plant Taxonomy	Basic			√				√			√		
	Env209	Animal Taxonomy	Basic		√			√					√		
	Env210	Climatology	Basic	√				√				√			
	Env211	Freedom and Democracy	Basic			√				√				√	
	Env212	Biochemistry	Basic	√				√				√			
Third Year First Semester	Env301	Air Pollution	Basic	√				√				√			
	Env302	Aquatic environment	Basic		√				√				√		
	Env303	Animal Environment	Basic		√				√				√		
	Env304	Biodiversity	Basic			√					√			√	

	Env305	Environmental Physiology	Basic			√						√			√
	Env306	Environmental Technology	Basic	√					√				√		
Third Year Second Semester	Env307	Water Pollution	Basic			√				√					√
	Env308	Molecular Biology	Basic	√				√					√		
	Env309	Entomology	Basic	√				√					√		
	Env310	Soil Pollution	Basic		√					√				√	
	Env311	Phycology	Basic			√				√					√
	Env312	radioactive pollution	Basic	√				√					√		
Fourth Year First Semester	Env401	graduation project	Basic	√				√					√		
	Env402	sustainable development	Basic	√				√					√		
	Env403	Remote sensation	Basic		√				√					√	
	Env404	Environmental Health	Basic	√				√					√		
	Env405	Renewable energy	Basic	√				√					√		
Fourth Year Second Semester	Env407	graduation project	Basic	√				√					√		
	Env408	Green Chemistry	Basic		√				√				√		

Semester	Env409	Epidemiology	Basic		√					√					√
	Env410	Environmental planning and management	Basic	√				√					√		
	Env411	Environmental economics	Basic	√				√					√		

- Please tick the boxes corresponding to the individual program learning outcomes under evaluation.

