University of Mosul
جامعة الموصل
كلية العلوم البيئية
قسم تقانات البيئة

First Cycle – Bachelor's Degree (B.Sc.) - Science\ Environmental Technologies

بكالوريوس علوم -تقانة بيئية

Table of Contents

1. Overview

This catalogue is about the courses (modules) given by the program of Environmental Technologies department to gain the Bachelor of Science \ Environmental Technologies. The program delivers (48) Modules with (6000) total student workload hours and 240 total ECTS. The module delivery is based on the Bologna Process.

نظره عامه

يتناول هذا الدليل المواد الدراسية التي يقدمها برنامج تقانات البيئة للحصول على درجة بكالوريوس علوم / تقانة بيئية . يقدم البرنامج (48) مادة دراسية، على سبيل المثال، مع (٦٠٠٠) إجمالي ساعات حمل الطالب و ٢٤٠ إجمالي وحدات أوروبية. يعتمد تقديم المواد الدراسية على عملية بولونيا.

2. Undergraduate Courses 2023-2024

Module 1

Code	Course/Module Title	ECTS	Semester
ENVT101	General Physics	7	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	3	71	104
Description			
The study of physics aims to identify the basic principles of classical physics, reach physical laws and formulate them, and enrich the student with different topics in physics such as mechanics and what it includes of topics (vectors, physical quantities, types of motion, Newton's laws and fluid science), thermodynamics and what it contains of topics such as (equilibrium Thermal and the general law of gases and others) in addition to electrical physics and the topics it contains related to current, voltage, resistances, types of connecting electrical circuits, etc., and helping and developing the student's abilities to solve mathematical problems related to the above topics. The study contains the practical part, which includes a set of experiments that are conducted in the laboratory as a practical application of some topics that were given to the student in the theoretical part.			

Module 2

Code	Course/Module Title	ECTS	Semester
ENVT102	General Chemistry	8	1

Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
4	3	102	98
Description			
Teaching strategies are to know the principles of chemistry and the methods and devices used to provide the necessary accumulation of knowledge in professional fields through the comprehension of basic chemistry topics, to give knowledge of chemistry and the ability to apply concepts to the solution of chemistry problems. Skills: Ability to apply theoretical and practical knowledge of chemistry to advanced studies in the chemical industry. Ability to apply occupational safety principles to ensure the safe use and disposal of chemicals and to keep their global environmental impact to a minimum. To be able to adapt to a rapidly evolving technological environment with an awareness of lifelong learning and to follow developments in science and technology. Also to be able to follow developments in areas of chemistry such as environment, pharmaceuticals, food, polymers, coatings and health and to solve basic problems in research and development laboratories related to these areas			

Module 3

Code	Course/Module Title	ECTS	Semester
ENVT103	General Biology	7	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
4	3	95	80
Description			
The science of life is concerned with the study of everything related to the life of plants, animals, humans, and microorganisms. In this subject, which is prepared for first-level students, the student learns about groups of different living organisms, such as animals and plants, and their structural nature, including cells of all kinds. And what is the cell that is the building unit of all forms of life and the stages of its division and its various functions and the performance of the main aspects of practical biology based on the description of the cell first and the stages of its division, with a focus on the use of the microscope its tools and equipment and the function of each part of it. Another major approach will be to focus on classifying the animal and plant kingdoms and covering major classes and their families with examples from each class. Understanding the vital activities of the cell and living organisms and their interaction with the surrounding environment and the nature of their distribution in it.			

Module 4

Code	Course/Module Title	ECTS	Semester
ENVT104	Mathematics	6	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
4	2	93	57

Description
The aim of this course is to give an introductory course on basics concepts of analysis, to teach limit, derivative, integral concepts and their applications. To develop problem solving skills and understanding of calculus theories through the application of techniques.The course will distributed as well Define basic functions, take the limit of functions andinvestigate their continuity, Take the derivatives of functions, using derivative a student cansketch and interpret the graph of functions, Solve maximum and minimum problems, Classifyintegrals, use techniques of integration,Define and classify improper integrals,In details, apply derivative and integral concepts. Define sequences, analyze the convergence ofsequences, can recognize series and use convergence tests for series, can find Taylor andMaclaurin series expansion of given functions. Derivative and its applications-Chain rule, MeanValue theorem, Rolle?s theorem. Curve sketching-Concavity, concave up, concave down, Maximum and minimum problems, Sequences and series-convergence and divergence. Introduction to integration, Definite integrals and fundamental theorem of calculus . Techniques of integration- Integration by parts, trigonometric integrals, integration of Rational functions, Improper integrals and Applications of integration. Sequences and series-convergence and divergence, Convergence tests for series- Integral test, comparison test, the root and ratio test, Alternating series, Taylor and Maclaurin series.

Module 5

Code	Course/Module Title	ECTS	Semester
UOM102	**English language**	2	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	1	33	17
Description			
The course will focus on English skills needed in universities such as listening and reading activities, writing research papers, giving presentations, studying vocabulary, and working in groups. Grammar and pronunciation will be targeted in context.This course enables students to approach College/University studies with the required foundational English language competencies. In this course, students will explore some of the innovative areas of English language study, while expanding their vocabulary and language skills needed to share scientific information within their community. They will learn English grammar and practice some of the language used to make comparisons when talking about global warming and climate change. Also, they will learn about English parts of speech and discuss conversation skills and students will be encouraging to participate in a dialogue. Main tenses will be introduced and discussed. Some effective strategies will be adopted in delivering this module such as, focusing on academic language, vocabulary exercises. Students will be given an opportunity to produce language through reading and speaking with receiving direct feedback to increase their comprehension and improve their language skills. This will be achieved through classes, group discussion, solving exercises, participation in conversations, interactive learningand writing activities that are interesting to the students.			

Module 6

Code	Course/Module Title	ECTS	Semester
ENVT105	**Geology**	6	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
4	3	78	72
Description			
Earth science is one of the important topics for students of the Department of Environmental Sciences and Technologies, as it is imperative for a specialist in the field of environmental science, at least, to know the types of minerals and rocks and their most important natural sources, as well as the processes of mineral formation and the rock cycle in nature.The geology module will provide students with an appropriate amount of information and experience in the field of earth science in a way that contributes to their acquisition of scientific knowledge and contributes to their academic preparation and helps them to know the basic principles of earth science, the processes of formation of rocks and minerals, and methods of their classification. The course includes the theories of Earth's formation and its major spheres, the processes of the creation of elements and their cosmic abundance, the basic principles of crystallography, minerals and rocks, their types and methods of classification, as well as an overview of historical geology, mass extinction and the geological time scale.			

Module 7

Code	Course/Module Title	ECTS	Semester
ENVT106	Analytical Chemistry	7	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
4	4	93	82
Description			
Strategies for teaching analytical chemistry is knowing the principles of chemical analysis, the methods and devices used, and the tools and techniques used.Analytical chemistry is divided into two main parts; Qualitative and quantitative analysis. Qualitative analysis involves knowing the composition of the sample without knowing its concentration. Quantitative analysis involves knowing the composition and concentration of the sample. Quantitative analysis includes two main methods; The Casque method and the automated method. Classic styles that are made using glass equipment. Quantitative analysis performed by automated device such as spectrophotometry, chromatography, etc. Therefore, the student learns about the types of volumetric titration used in chemical analysis. Learn about the principles of optical spectroscopy. Know the deviations.			

Module 8

Code	Course/Module Title	ECTS	Semester
ENVT107	Environmental Science	4	2

Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
4	2	63	37
Description			
The ecology track deals with interactions between environmental factors and organisms, provides basic characteristics of population ecology and relationships between species, and deals with the concept of communities and ecosystems. The distinctive focus is on describing the structural, spatio-temporal dynamics within each of the ecological levels (species, communities, communities, ecosystem, biome, biosphere) as well as between different levels (for example, the influence of changes in ecosystem properties of biological communities and population dynamics of the organisms that make up such a community). The issues discussed are presented in a very systematic manner, which allows students a comprehensive understanding of the mutual but not discrete direct and indirect interactions, energy and information between biotic and abiotic environmental factors. The course content allows students to develop a critical attitude towards human-caused changes in ecosystems (from the organism to the biosphere), and enables them to apply the new knowledge obtained to develop sustainable management with ecosystems.			

Module 9

Code	Course/Module Title	ECTS	Semester
	Mathematics	6	3
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
4	2	93	57
Description			
The aim of this course is to give an introductory course on basics concepts of multi objective function analysis, to teach limit, partial derivative, multi-integral concepts and their applications. To develop problem solving skills and understanding of Advance calculus theories through the application of techniques. Introduce to matrix because the Matrices have wide applications in engineering, physics, economics, and statistics as well as in various branches of mathematics. Matrices also have important applications in computer graphics, where they have been used to represent rotations and other transformations of images. In details, the module content the subjects that distributed by: Matrices and Determinants, Addition and subtraction of matrices. Multiplication and transpose of matrices Adjoint of a square Matrix. Inverse of a square Matrix. Gramer's rule. Vectors in plane, Vectors in space Dot and cross product, Lines and planes in three-dimensional space. Partial derivatives, Chain rule. Double integration rectangular coordinate. Triple integrals in rectangular coordinates. Infinite Serie, Sequences and series-convergence and divergence, Convergence tests for series- Integral test, comparison test, the root and ratio test, Alternating series , Taylor and Maclaurin series.			

Module 10

Code	Course/Module Title	ECTS	Semester

UOM103	**Computer Science**	3	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	3	63	12
Description			
Enhancing the student's knowledge of computers, their various applications, their software, which is used in a variety of industries, and the most recent technological advancements. The fundamentals of computers, common programs, viruses, and how to get rid of them are covered in this course. How to set up and operate office software and service packages. how to use email and the internet. The promotion of self-education, which enables the teacher to account for individual differences and ultimately improves the quality of learning and teaching, is one of the goals of using technology in the classroom. the capacity to fulfill educational objectives involving skills, such as learning, computer, and problem-solving Students are drawn to it because it is an interesting topic because it is a fun way to break the student's monotonous memorization and work routine. It frees the teacher from spending time and effort on routine educational tasks, allowing him or her to devote more time and energy to designing learning situations and experiences that support the intellectual and social growth of students' personalities. creating programs that are simple to adapt to student needs presenting the scientific material, identifying students' areas of weakness, and providing corrective exercises that are appropriate for their needs accelerating learning and improving performance They aid in representing the difficult to provide real world			

Module 11

Code	**Course/Module Title**	**ECTS**	**Semester**
UOM101	**Arabic Language**	2	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	1	33	17
Description			
Free verse and classical poetry, poetry models for memorization. Introduction to Arabic grammar (syntax and morphology) . The middle hamza.			

Module 12

Code	**Course/Module Title**	**ECTS**	**Semester**
UOM104	**Democracy and Human Rights**	2	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	1	33	17
Description			

The basic rights attached to the human person as a human being represent the highest creatures, and they are established for all persons without discrimination because of origin, color, sex, creed, language, sect, nationality, or any other reason, and one of the most important characteristics is that they are attached to the same person and have a universal character, and are present in civilizations. The old, human rights in divine laws, and the types of human rights are civil, political, economic, social and intellectual rights, and there are new human rights, the rights of minorities, the rights of vulnerable groups, and human rights in the Iraqi constitution of 2005, and human rights guarantees at the national and international levels.
As for the definition of democracy, it is the people's choice of their government and the dominance of popular power over the government they choose) and the content of democracy is nomination and election, and its forms are direct democracy, indirect (parliamentary) democracy, semi-direct democracy, which includes systems such as the presidential system, the parliamentary system, and the most important issues that can be referred to in Democratic transition in Iraq, and the most important problems faced by the democratic experience there.

Module 13

Code	Course/Module Title	ECTS	Semester
ENVT212	**Hydrology**	5	3
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	4	90	35
Description			

Hydrology is the scientific study of water and its interactions within the Earth's systems. It plays a crucial role in understanding and managing water resources, assessing water availability, and predicting water-related hazards. Hydrology investigates the movement, distribution, and properties of water in various forms, including precipitation, surface water, and groundwater. In addition, hydrology studies the complex processes of evaporation, transpiration, infiltration, surface runoff, and groundwater flow to analyze the water cycle and its impact on ecosystems and human activities. Hydrology encompasses a wide range of topics, including hydrological measurements, data analysis, hydrological modeling, water quality assessment, and water resource management. It is a multidisciplinary field that combines elements of geology, physics, mathematics, chemistry, and environmental science. By studying hydrology, we gain insights into the sustainable use and conservation of water, as well as the implications of climate change on water availability.

Module 14

Code	Course/Module Title	ECTS	Semester
ENVT209	**Fluids Mechanic 1**	6	3
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**

4	3	78	72
Description			
The main strategy that will be adopted in presenting this course is to encourage students to participate and interact with the material through the course, while improving, expanding and nurturing thinking skills, and to train students on scientific and logical thinking methods and to learn about the concept of fluids. And this will be achieved through the scientific material of the course and interactive educational programs and its theoretical, practical and laboratory applications, and through the development of logical methods of scientific thinking and linking the scientific material and its application in practical life. This is done by identifying the physical fluid properties such as mass density, weight density, specific weight, viscosity, surface tension property and measuring them practically through laboratory devices and the method of calculating them theoretically using theories and laws and identifying their units of measurement in international measurement systems, and getting to know pressure measuring devices practically in The laboratory and learning to calculate pressure theoretically through mathematical theories and equations, and addressing the forces affecting floating and submerged objects in fluids and how to analyze and calculate these forces, as well as learning about pressure and velocity analysis, calculating discharge in pipes, determining their diameters, how to connect them, and calculating losses Which takes place practically in the laboratory and theoretically through its own laws and theories.			

Module 15

Code	Course/Module Title	ECTS	Semester
ENVT211	**Environmental Statistics**	4	3
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	2	63	37
Description			
Statistics is considered one of the important means in scientific research, whose methods and tools are included in various fields of life, so that it is qualified to have a basic share in the work of countries, institutions and organizations on which economic and social development depends globally and locally by relying on the results it provides in a specific field. From this standpoint comes the importance Statistics is one of the important means that uses its rules, laws and different methods in the process of collecting, summarizing, presenting and analyzing data and interpreting results. Therefore, we seek to develop the student's skills and enrich him with information about statistics, its symbols, tools, various uses, and its software used in various fields. **As for the environmental field, our goal was to harness statistical tools in solving environmental problems by taking samples of water or air pollution and even soil, analyzing them statistically, interpreting the results and presenting appropriate solutions.manually and compare the results practically through the use of ready-made statistical programs, including the SPSS program, discussing and interpreting the results, as well as enriching the student with modern information, keeping pace with the rapid technological development in this field, and seeing the latest findings in the field of data science and artificial intelligence.**			

Module 16

Code	Course/Module Title	ECTS	Semester

ENVT213	Soil Physics	5	3
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	3	90	35
Description			
Identify soil pollutants, some chemical properties, methods of estimation after taking samples, making extracts, estimating soil cations and anions, method of analyzing and classifying results, dealing with a soil laboratory, preparing samples for examination, and approved recommendations for reduce environmental impact. At the end of the course, the student acquires knowledge about soil pollutants, conducting chemical analyzes, and estimating cations and anions in the soil, and the student is able to: take soil samples, prepare extracts, examine electrical conductivity and pH, estimate ions in the soil extract within the soil laboratory, present the results and compare them with international classifications, and follow the recommendations To study and pay attention to the environmental aspect. Indicative content includes the following: 1. General principles of soil pollution and Sources and nature of soil pollution and its harmful effects Introduction to Soil Pollution lab. 2. Methods of soil sampling and defined Organic matter, Soil extraction procedures . 3. Heavy Metals, Soil pollution with solid waste, pesticides and chemicals, Soil contamination with oil, Soil pollution with chemical fertilizers .cations and anions; pH meter, Electrical Conductivity. 5. Wind Erosion, The procedures used to protect the soil from pollution by wind erosion, Water Erosion, The procedures used to protect the soil from pollution by water erosion, Desertification. The main strategy that will be adopted in presenting this unit is for the student to know the pollutants that occur in the soil, their source, their impact on the soil, the extent to which they can be identified through the use of soil laboratories, conducting chemical tests for them, presenting the practical results and comparing them with the approved classifications and their impact on the soil and the environmental aspect.			

Module 17

Code	**Course/Module Title**	**ECTS**	**Semester**
UOM210	**Environmental Chemistry**	6	3
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
4	3	78	72
Description			
The course Environmental chemistry provides students with basic knowledge useful in basic principles of environmental chemistry (Content Solid-state and Liquid state environmental chemistry, Gaseous-state environmental chemistry, Applied environmental chemistry) . They will be able to apply previous knowledge on analytical chemistry to environmental processes and samples. They will understand the interconnections between different sectors of the environment (soil, water, atmosphere) and the effect of human activities on the natural chemical processes. The main aim of the course is to equip students with the knowledge of the chemical properties of elements and compounds, as well as about the chemical reactions essential for the emergence and existence of the cycling and accumulation of pollutants in the environment. The course addresses the chemistry of elements and compounds in the atmosphere, water and soil, and lays special emphasis on the processes that define the connections and the dependence between individual segments of environment.			

Module 18

Code	Course/Module Title	ECTS	Semester
UOM2012	**Arabic Language 2**	2	3
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2		33	17
Description			
The reason for the establishment of grammar and who established it. Speech and what it consists of: nouns, verbs, and prepositions. Subjects and predicates, their types, and their applications Verbs and their signs: past, present, and imperative tenses. Original and subsidiary diacritical marks and their applications. Free verse and classical poetry: Poetic models for memorization Rules for writing the hamza,			

Module 19

Code	Course/Module Title	ECTS	Semester
UOM2050	**The Crimes of the Baath Regime in Iraq**	2	3
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2		33	17
Description			
The concept of Ba'ath regime crimes and their types. Decisions issued by the Iraqi Supreme Criminal Court, examples of human rights violations during the Ba'ath regime. The most prominent violations of the Ba'ath Party regime in Iraq, and psychological and social crimes and their effects. War and radioactive pollution, the destruction of major cities, the draining of marshes, and the destruction of orchards.			

Module 20

Code	Course/Module Title	ECTS	Semester
ENVT214	**Fluids Mechanic 2**	5	4
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	3	90	35
Description			

Identify the characteristics of fluid flow in pipes using different connection methods, calculate the discharge in these pipes, the speed of fluid flow in them, and how to calculate the appropriate diameters for transporting these fluids. [25 hrs]
Learn about several methods for calculating losses in pipes according to the method of connecting them and calculating the pressure and speed of fluid flow in the pipes.[24hrs]
Learn about the types of open channels and how to design them.[15hrs]
Identifying the devices for calculating losses in pipes practically in the laboratory and the laws and equations used in calculating them, using the devices and special methods for measuring discharge in the laboratory and identifying the laws and equations for calculating it theoretically. [20hrs]
Revision problem classes [6 hrs]

Module 21

Code	Course/Module Title	ECTS	Semester
ENVT215	**Hydrology 2**	5	4
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	3	90	35
Description			
• Understanding Groundwater Systems: Provide students with a comprehensive understanding of groundwater systems, including their occurrence, distribution, and movement. • Interactions between Groundwater and Surface Water: Explore the relationship between groundwater and surface water, and the processes that govern this interaction. • Groundwater Resources and Management: Examine the importance of groundwater as a vital water resource, including its sustainable management, protection, and restoration. • Hydrogeological Methods: Introduce students to techniques used to investigate, evaluate, and model groundwater systems. • Impact of Human Activities: Discuss the impact of human activities on the quality and quantity of groundwater, and the implications for water security and environmental sustainability. • Understanding the Impact of Climate Change on Groundwater: Identify the climatic factors that most affect groundwater.			

Module 22

Code	Course/Module Title	ECTS	Semester
UOM2032	**Computer science 2**	3	4
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	12
Description			

Security and Networks: What is a Network? Types of Networks. Basic Network Components.
E-Commerce: Concepts of Electronic Banking. Online banking includes ATM and debit card services, telephone banking, SMS banking, e-alerts, and mobile banking.
Computer Troubleshooting: Identify and resolve common hardware and software problems faced by computer users.
Introduction to Artificial Intelligence (continued): Key characteristics of AI, benefits of AI, challenges, and ethical considerations.
Ethical Challenges in AI: AI ethics, privacy, surveillance, and the impact of AI on the labor market.

Module 23

Code	Course/Module Title	ECTS	Semester
ENVT218	**Engineering Analysis**	5	4
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	90	35
Description			
Indicative content includes the following. Learn the concept of differential equations, methods of forming differential equations, methods of solving first-order and first-order differential equations, and methods of solving first-order differential equations with applied examples. [35 hours] Learn how to solve second-order differential equations according to the type of function using multiple methods and techniques with practical examples. [40 hours] Solving simultaneous differential equations with applied examples. [10 hours] Revision problem classes [5 hours]			

Module 24

Code	Course/Module Title	ECTS	Semester
ENVT216	**Environmental Chemistry 2**	5	4
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	90	35
Description			

Biological Oxygen Demand 1
Biological Oxygen Demand 2
Chemical Oxygen Demand 1
Chemical Oxygen Demand 2
Calcium Ion in Water Using Different Methods
Fluoride in Different Samples
Carbonate Measurement in Water
Bicarbonate Measurement in Water
Phosphate Ion
Nitrate Ion
Lead Measurement in Water
Cadmium Measurement in Water
Zinc Measurement in Water
Methods for Analyzing Results and Comparing Them to Global and Local Standards

Module 25

Code	Course/Module Title	ECTS	Semester
ENVT217	**Environmental Geology**	5	4
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	78	47
Description			
Environmental geology is an essential subject for students of the faculties of environmental sciences. It is also indispensable for a specialist in the field of environmental sciences to possess the basic concepts of this subject, because of its importance in the field of understanding and analyzing internal and surface geological environments and processes and their relationship to natural hazards and their management. The environmental geology course aims to provide students with information and expertise in the field of environmental geology in a manner that contributes to their acquisition of the necessary knowledge in the following areas: • Naturally occurring surface and internal processes and their environmental impacts. • The principles of geochemical exploration and the natural concentrations of chemical elements, and their use in the investigation of natural and unnatural sources of pollution. • The nature of the basic geological processes and their relationship to natural hazards, and identifying the areas most exposed to geological hazards and their impact on humans. • Experience in the field of topographical and geological maps. The course includes the basics of environmental geology, geological environments, geochemical exploration, plate tectonics theory, terrestrial processes and natural hazards represented by volcanoes, earthquakes, landslides, floods, drought and desertification, as well as natural materials.			

Module 26

Code	Course/Module Title	ECTS	Semester
UOM2022	**English language 2**	2	4

Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
2		33	17
Description			
Indicative content includes the following. Part A- Parts of speech: Introduction - Identify the main parts of speech in English. – Verbs (definition, types, and use of adjectives) – Adverbs (definition, types, and use of adverbs) – Prepositions (definition, types, and use of verbs) [14 hrs] Part B- Conversation skills: Encouraging students to express themselves in English – to talk about science using English – improvement of pronunciation skills [4 hrs] Revision problem classes [2 hrs] Part C- English grammar: Introduction - future tense -Negatives – Questions- Requests and offers –Types of sentences in English – academic writing – environmental terminology [22 hrs]			

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