



Course Syllabus

1	Course title	Principles of Environmental Geology	
2	Course number	0305102	
3	Credit hours	3 hours weekly	
	Contact hours (theory, practical)	3 hours	
4	Prerequisites/corequisites	0335101 (General Geology)	
5	Program title	B.Sc. Program in Environmental and Applied Geology	
6	Program code	0305	
7	Awarding institution	The University of Jordan	
8	School	School of Science	
9	Department	Geology Department	
10	Course level	First-year B.Sc.	
11	Year of study and semester (s)	2023/2024 Spring Semester	
12	Other department (s) involved in teaching the course	NA	
13	Main teaching language	English	
14	Delivery method	☐ Face to face learning ☒ Blended ☐ Fully online	
15	Online platforms(s)	☒ Moodle ☒ Microsoft Teams ☐ Skype ☐ Zoom ☐ Others.....	
16	Issuing/Revision Date	18.2.2024	

17 Course Coordinator:

Dr. Saber A. Al-Rousan, Office No. Geo. Building 101
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**18 Other instructors:**

NA

19 Course Description:

As stated in the approved study plan.

Earth: systems and cycles; hazardous geologic processes: earthquakes, volcanic eruptions, tsunamis, landslides, sinkholes, floods; hazards of ocean and weather; meteorite impacts; fossil fuels; energy alternatives; mineral resources and the impact of their mining on the environment; soil resources; water resources; human impacts on the environment: waste disposal, contaminants in the geologic environment; atmospheric change and global warming.



20 Course aims and outcomes:

A- Aims:

Acquaint students with basic information about environmental geology which is concerned with the interactions between humans and the geological environment. The aims of this course are to:-

- Introduce students to the important concepts and topics of environmental geology.
- Help students to understand the origin of the earth and its spheres with all of their interactions.
- Provide students with knowledge about the internal and external earth processes and their hazards to life and property.
- Help students to explore how humans impact the environment through different activities, and how environmental geology can be used to mitigate these impacts.
- Introduce students to the most common methods used to mitigate the hazards of the internal and external earth processes.

B- Students Learning Outcomes (SLOs):

Upon successful completion of this course, students will be able to:

SLOs	SLO (1)	SLO (2)	SLO (3)	SLO (4)	SLO (5)	SLO (6)	SLO (7)	SLO (8)	SLO (9)
SLOs of the course									
1-Understand the origin and development of the universe (earth and planets).	X	X							
2-Describe the scientific method as applied in geology.	X	X							
3-Evaluate the impacts of human population growth on natural resources.	X	X							
4-Identify the occurrence and classification of earth's materials (rocks and minerals).	X	X							
5-Explain the theory of plate tectonics and tectonic hazards.	X	X							
6-Explain how internal earth processes (plate tectonics, earthquakes, and volcanoes) create hazards to life and property.	X	X							
7-Explain how external earth processes (streams, coastal zone, mass movements, ice and glaciers, winds and deserts, and climate changes) create hazards to life and property.	X	X							
8-Understand and explain the most common methods used to mitigate hazardous natural processes resulting from internal and external earth processes.	X	X							

21. Topic Outline and Schedule:

Week	Topic	Student Learning Outcome	Learning Methods (Face to Face/Blended/ Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
1 +2	1. Planet and Population: An Overview	1, 2, 3	Blended	E-learning	Asynchronous	Quizzes, First Exam, Final Exam	Textbook, Lecture Notes
3	2. Rocks and Minerals—A First Look	4	Blended	E-learning	Asynchronous	Quizzes, First Exam, Final Exam	Textbook, Lecture Notes
4 + 5	3. Plate Tectonics	5, 6	Blended	E-learning	Asynchronous	Quizzes, Second Exam, Final Exam, Interactive videos	Textbook, Lecture Notes
6 + 7	4. Earthquakes	6, 8	Blended	E-learning	Asynchronous	Quizzes, Second Exam, Final Exam, Interactive videos	Textbook, Lecture Notes
8 + 9	5. Volcanoes	6, 8	Blended	E-learning	Asynchronous	Quizzes, Second Exam, Final Exam, Interactive videos	Textbook, Lecture Notes
10-11	6. Streams and Flooding	7, 8	Blended	E-learning	Asynchronous	Quizzes, Final Exam, Interactive videos	Textbook, Lecture Notes
12 + 13	7. Coastal Zone and Processes	7, 8	Blended	E-learning	Asynchronous	Quizzes, Final Exam, Interactive videos	Textbook, Lecture Notes
14	8. Mass Movements	7, 8	Blended	E-learning	Asynchronous	Quizzes, Final Exam, Interactive videos	Textbook, Lecture Notes
15	9. Ice and Glaciers, Wind and Deserts	7, 8	Blended	E-learning	Asynchronous	Quizzes, Final Exam, Interactive videos	Textbook, Lecture Notes
16	10. Climate—Past, Present, and Future	7, 8	Blended	E-learning	Asynchronous	Quizzes, Final Exam, Interactive videos	Textbook, Lecture Notes



22 Evaluation Methods:

Opportunities to demonstrate achievement of the SLOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	SLOs	Period (Week)	Platform
1 st Exam	15	1, 2	1, 2, 3, 4	Week 3	Face to Face
2 nd Exam	15	3, 4, 5	5, 6, 8	Week 9	Face to Face
Quizzes	10	1-10	1-8	Weekly	Face to Face
Student Presentations	10	1-10	1-8	Week 14	Face to Face
Interactive videos	10	1-10	1-8	Week 6	Elearning
Final Exam	40	1-10	1-8	Week 15	Face to Face

23 Course Requirements

(e.g: students should have a computer, internet connection, webcam, account on a specific software/platform...etc):

Students need a computer and access to the internet to watch some important interactive videos.

24 Course Policies:

A- Attendance policies:

Attendance is compulsory and not to exceed (with acceptable excuse only) 15% of the total lectures, the student will automatically deprive if he exceeds this limit (according to JU regulations).

B- Absences from exams and submitting assignments on time:

It is not allowed to be absent from the exams, in case of compelling conditions, a makeup exam will be held. The assignments should be all delivered on time.

C- Health and safety procedures: *NA*

D- Honesty policy regarding cheating, plagiarism, misbehavior:

There will be no leniency or tolerance with regard to cheating and system bypass issues, necessary actions will be taken by the department committee (according to JU regulations).



E- Grading policy:

As seen in section 22 above, the following scale may be subjected to changes (depending on the results).

Percentage	Letter	Percentage	Letter
0-39	F	40-44	D-
45-49	D	50-54	D+
55-59	C-	60-64	C
65-69	C+	70-74	B-
75-79	B	80-84	B+
85-89	A-	90-100	A

F- Available university services that support achievement in the course:

The main library, computer rooms with internet access.

25 References:

A- Required book(s), assigned reading and audio-visuals:

The Environmental Geology" by Carla Montgomery (Author), 10th Edition, McGraw-Hill Education; 2013

B- Recommended books, materials, and media:

Introduction to Environmental Geology by Edward A. Keller (Author), 5th edition, Prentice Hall, 2011

26 Additional information:

NA

Name of Course Coordinator: Dr. Saber Al-Rousan -Signature: ----- Date: -----
Head of Curriculum Committee/Department: ----- Signature: -----
Head of Department: ----- Signature: -----
Head of Curriculum Committee/Faculty: ----- Signature: -----
Dean: ----- Signature: -----