

Course Syllabus

1	Course title	General Geology Lab	
2	Course number	0335111	
3	Credit hours	1	
	Contact hours (theory, practical)	3, practical	
4	Prerequisites/corequisites	General Geology 101	
5	Program title	B.Sc. in Environmental and Applied Geology	
6	Program code	-	
7	Awarding institution	-	
8	School	School of Science	
9	Department	Geology	
10	Course level	100 level	
11	Year of study and semester (s)	Fall and Spring semesters	
12	Other department (s) involved in teaching the course	None	
13	Main teaching language	English and Arabic	
14	Delivery method	<input checked="" type="checkbox"/> Face to face learning <input type="checkbox"/> Blended <input type="checkbox"/> Fully online	
15	Online platforms(s)	<input checked="" type="checkbox"/> Moodle <input type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....	
16	Issuing/Revision Date	Spring 2024	

17 Course Coordinator:

Name: Hind Ghanem

Contact hours: Monday and Wednesday 12-1 pm. Tuesday 10-11 am. Sunday and Thursday by appointments.

Office number: Room # 215, Geology Building

Phone number: 22281

Email: h.ghanem@ju.edu.jo

18 Other instructors: NONE

Name:
Office number:
Phone number:
Email:
Contact hours:

19 Course Description:

As stated in the approved study plan.

In this course, students study different topics in ten weekly labs. The topics include: 1. Studying crystal systems and their elements of symmetry (2 labs). 2. Studying the physical properties of minerals, and using these properties to identify different minerals, in particular the common rock-forming minerals (2 labs). 3. Studying the three major types of rocks (igneous, sedimentary, and metamorphic) and identify common rocks in each of the three major types (3 labs). 4. Studying topographic maps and acquiring the skill of reading and using maps properly in order to be prepared for studying geologic maps (2 labs). 5. Studying simple geologic maps and earth structures (1 lab).

20 Course aims and outcomes:

A- Aims: Introduce students to earth materials (minerals and rocks) and the fundamental geologic processes involved in their formation. 2. Introduce students to the basic skills needed to read and use topographic maps. 3. Introduce students to the use and interpretation of geologic maps and Earth structures.

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)
Course ILOs									
1. To recognize materials described as minerals and recognize the different mineral groups with emphasis on silicates. To understand and identify the different physical properties of minerals and be able to use the proper tools to measure/describe these properties to identify hand specimens of common minerals.	✓	✓	✓						
2. To describe and identify the different crystal systems and forms in words, crystal models, and sketches. To understand, recognize, and describe the elements of symmetry of different crystal forms.	✓	✓	✓						
3. To recognize the common igneous, sedimentary, and metamorphic rocks in hand-specimen and to describe their textures and compositions in words. To understand the geologic processes and environments involved in forming different rock types and their role in the variation of rock textures and compositions.	✓	✓	✓						
4. Read and use topographic maps (find directions, measure distances, find elevations, identify topographic features on topographic maps, etc.).	✓	✓	✓						
5. Read, use, and interpret geologic maps, and construct cross-sections that illustrate geologic structures and features.	✓	✓	✓						
6. Develop some of the simplest and most basic skills required for fieldwork (using maps, identifying minerals and rock types in-situ, identifying structures, etc.).	✓	✓	✓						

21. Topic Outline and Schedule:

Week	Lab	Topic	Student Learning Outcome	Learning Methods (Face to Face/Blended/ Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
1	0	Organizational meeting.	-	-	-	-	-	Syllabus
2	1	Lab 8: Topographic maps 1	4, 6 / 1,2, 3	Face to Face + supplementary material and lectures on E-learning	E-learning	Synchronous	Quiz, Lab exercise Midterm Exam	Lecture + Lab exercise + Online videos and resources
3	2	Lab 9: Topographic maps 2	4, 6 / 1,2, 3	Face to Face + supplementary material and lectures on E-learning	E-learning	Synchronous	Quiz, Lab exercise Midterm Exam	Lecture + Lab exercise + Online videos and resources
4	3	Lab 10: Geologic maps 1	5, 6 / 1,2, 3	Face to Face + supplementary material and lectures on E-learning	E-learning	Synchronous	Quiz, Lab exercise Midterm Exam	Lecture + Lab exercise + Online videos and resources
5	4	Lab 11: Geologic maps 2	5, 6 / 1,2, 3	Face to Face + supplementary material and lectures on E-learning	E-learning	Synchronous	Quiz, Lab exercise Midterm Exam	Lecture + Lab exercise + Online videos and resources
6	5	Lab 1: Minerals and their physical properties	4, 5, 6, 9	Face to Face + supplementary material and lectures on E-learning	E-learning	Synchronous	Quiz, Lab exercise Final Exam	Lecture + Lab exercise + Online videos and resources
7	-	Midterm Exam: Monday 8/4/2024. Material: labs 8-11						
8	6	Lab 2: Mineral identification with emphasis on common rock-forming minerals.	4, 5, 6, 9	Face to Face + supplementary material and lectures on E-learning	E-learning	Synchronous	Quiz, Lab exercise Final Exam	Lecture + Lab exercise + Online videos and resources
9	7	Lab 3: Crystallography I (introduction, symmetry, and crystal systems).	4, 5, 6, 9	Face to Face + supplementary material and lectures on E-learning	E-learning	Synchronous	Quiz, Lab exercise Final Exam	Lecture + Lab exercise + Online videos and resources
10	8	Lab 4: Crystallography II (crystal forms and more emphasis on crystal systems).	7, 9	Face to Face + supplementary material and lectures on E-learning	E-learning	Synchronous	Quiz, Lab exercise Final Exam	Lecture + Lab exercise + Online videos and resources
11	9	Lab 5: Identification and classification of igneous rocks	7, 9	Face to Face + supplementary material and	E-learning	Synchronous	Quiz, Lab exercise Final Exam	Lecture + Lab exercise + Online

				lectures on E-learning				videos and resources
12	10	Lab 6: Identification and classification of sedimentary rocks	8, 9	Face to Face + supplementary material and lectures on E-learning	E-learning	Synchronous	Quiz, Lab exercise Final Exam	Lecture + Lab exercise + Online videos and resources
13	11	Lab 7: Identification and classification of metamorphic rocks.	8, 9	Face to Face + supplementary material and lectures on E-learning	E-learning	Synchronous	Quiz, Lab exercise Final Exam	Lecture + Lab exercise + Online videos and resources
14	-	Monday 27/5/2024 – Review Final Exam- on Wednesday 29/5/2024: labs 1-7						

22 Evaluation Methods:

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

Evaluation Activity	Mark	Topic(s)	Course SLOs	Period (Week)	Platform
Lab exercises/reports	20	All labs	1-6	Every week	Face to face
Weekly quizzes	5 (the average of the best 5 quizzes grades)	All labs	1-6	Every week	Face to face
Midterm exam	25	Labs 8-11	1, 2, 3, 6	Week 5	Face to face
Final exam	50	Labs 1-7	4, 5, 6	Week 15	Face to face

23 Course Requirements

- Students need access to internet to watch the video.
- Preparing. For identification of hand-specimens (minerals and rocks): hand lenses, magnets, diluted HCl, porcelain plates, and glass slides.
- For drawing and sketching maps and cross-sections: Colored pencils, pencils, eraser, ruler, protractor, etc.

24 Course Policies:

- A- Attendance policies: Missing two labs with or without an official excuse will result in getting absence fail grade and the student will need to re-enroll in the lab when it is next available.
- B- Absences from exams and submitting assignments on time: Not turning in lab reports and assignments on time will result in getting a zero. No makeup exams unless the student missed the exam for an officially accepted excuse.
- C- Health and safety procedures: NA
- D- Honesty policy regarding cheating, plagiarism, misbehavior: As decided by the University of Jordan regulations.
- E- Grading policy: see section 22
- F- Available university services that support achievement in the course: NA

25 References:

- A- Required book(s), assigned reading and audio-visuals: lab manual.
- B- Recommended books, materials, and media:
Laboratory Manual in Physical Geology, 10th edition. Richard M. Busch and Dennis G. Tasa.

26 Additional information:

NA

Name of Course Coordinator: -----	Signature: -----
-- Date: -----	
Head of Curriculum Committee/Department: -----	Signature: -----
Head of Department: -----	Signature: -----
Head of Curriculum Committee/Faculty: -----	Signature: -
Dean: -----	Signature: -----