

Course Syllabus

1	Course title	Earth and Environmental Sciences Teaching
2	Course number	0305402
3	Credit hours (theory, practical)	(2, 0)
	Contact hours (theory, practical)	2
4	Prerequisites/corequisites	0345392
5	Program title	BSc. in Environmental and Applied Geology
6	Program code	0305
7	Awarding institution	
8	School	Science
9	Department	Geology
10	Level of course	4 th year
11	Year of study and semester (s)	Fall or Spring of the last year
12	Final Qualification	
13	Other department (s) involved in teaching the course	None
14	Language of Instruction	English and Arabic
15	Date of production/revision	Spring 2019

16. Course Coordinator:

Bety Salem Saqarat

B.Saqarat@ju.edu.jo

Office hours:

Sunday 11-12

Tuesday 11-12

Thursday 11-2

17. Other instructors:

None

18. Course Description:

This course deals with recent approaches to science teaching and in particular Earth and environmental sciences; e.g. how to teach using critical thinking, scientific reasoning and discussions with the class room rather than narrative teaching. How to use illustrations: fossils, rock and mineral specimens, maps, compass, etc. Encouraging the teacher to conduct field trips and to get samples from the local environment nearby the school. How to evaluate the students through teaching them the various types of examination questions. Working in groups and its importance, how to conduct an experiment and write its report, how to write report in general, present and discuss it, student file for their activities throughout the year.

19. Course aims and outcomes:

<p>A- Aims:</p> <p>This course is essential for our students to provide them a base knowledge in teaching methods and skills as well as solid background to build up their future careers in primary, middle, and high secondary schools. The aims of this course are:</p> <ol style="list-style-type: none"> 1. To contribute in creating the teacher character of the students, by helping them in the way to manage their classrooms and preparing well for their lessons. 2. To provide the best teaching methods they can use in their classrooms and the geological equipments their labs must have in their schools. 3. To push our students to use the modern teaching ways to help their students in the future in the best scientific methods and researches ethically. 4. To collaborate with our students in building up the sketches and diagrams which can illustrate the geological processes and cycles <p>B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to</p> <ol style="list-style-type: none"> 1. Got comprehensive skills in the earth and environmental teaching methods. 2. Able to simplify the scientific issues for public as well as for their future school. 3. Draw sketches and diagrams showing the internal and external processes in addition to cycles occurring in nature. 4. Able to manage their future classrooms and fill the teaching atmosphere with critical and productive discussions. 5. Use the proper geological and environmental illustrations and materials for their classes and school labs.

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference

21. Teaching Methods and Assignments:

The class meets two times per week (S, T). The material is presented in PowerPoint presentations along with explanation and illustrations on the whiteboard. Students have the main references, and they should take notes during class. Students are encouraged to be an active part of the lecture by asking them questions and giving them the freedom to ask questions, so their participation is an essential part of the lecture. Students must do their home works and prepare a project to use it in explanation of a subject related to earth and environmental sciences.

22. Evaluation Methods and Course Requirements:

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

23. Course Policies:

A- Attendance policies: Students are expected to attend each class meeting and attendance will be recorded. Please arrive prior to the start time of each class. During the class students are asked to refrain from using cell phones for calls or text messages. Missing 15% or more of the lectures and labs with or without an officially accepted 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 handing in assignments on time: ONLY if the student shows a proof of an emergency and compelling accepted excuse, a makeup exam will be given.

C- Health and safety procedures:

D- Honesty policy regarding cheating, plagiarism, misbehavior:

E- Grading policy:

1st hourly exam 30%

2nd home works and "Project" 30%

Final exam 40%

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

24. Required equipment: (Facilities, Tools, Labs, Training....)

Chalk or white board, data show projectors.

25. References:

Recommended books, materials, and media:

-Allard, D.W., and Barman, C.R., 1994, The learning cycle as an alternative method for college science teaching, Bioscience, v.44, p. 99-101.

-American Geophysical Union, 1994, Report of the AGU Chapman Conference on scrutiny of undergraduate geoscience education; 55p.

-Anderson, L.W., and Krathwohl, D.R., 2001, A Taxonomy for Learning, Teaching, and Assessing: A revision of Bloom's Taxonomy of educational objectives. Longman

- Bitner, B.L., 1991, Formal operational reasoning modes: Predictors of critical thinking abilities and grades assigned by teachers in science and mathematics for students in grades nine through twelve, Journal of Research in Science Teaching, v.28, p. 265-274.

-Bloom, B.S., Engelhart, M.D., Furst, E.J., Hill, W.H., and Krathwohl, D.R., 1956, Taxonomy of educational objectives: Handbook 1: Cognitive domain, David McKay.

-Brunkhorst, B.J., 1996, Assessing student learning in undergraduate geology courses by correlating assessment with what we want to teach, Journal of Geoscience Education, v. 44, p.373-378

- (الناشف، سمير) 2009 المفاهيم العلمية وطرائق التدريس عمان: دار المناهج.
- (نوفل، محمد بكر) 2007 الذكاء المتعدد في غرفة الصف النظرية والتطبيق عمان: دار المسيرة.
- (هارمن، ميريل .) 2000 استراتيجيات لتنشيط التعلم الصفّي دليل للمعلمين) ترجمة مدارس الظهران الأهلية ، السعودية: دار الكتاب التربوية
- (اليمني، عبدالكريم وعسكر، علاء 2015) طرائق التدريس العامة، عمان: دار زمزم.
- (حسين، حسين محمد) 2007 . التدريس باستخدام طريقة المشروع، دار مجدلاوي عمان.
- (حسين، محمد عبد الهادي .) 2008 الذكاءات المتعددة مراجعات وامتحانات، القاهرة: دار العلوم للنشر

26. Additional information:

Name of Course Coordinator: -----Signature: ----- Date: -----

Head of curriculum committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: -----Signature: -----