The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Environment
2	Course number	0305100
3	Credit hours (theory, practical)	3 hours (3,0)
	Contact hours (theory, practical)	3 hours (3,0)
4	Prerequisites/corequisites	-
5	Program title	Environmental and Applied Geology
6	Program code	
7	Awarding institution	The University of Jordan
8	Faculty	Science
9	Department	Geology
10	Level of course	- elective class for students outside the department
11	Year of study and semester (s)	2016/2017
12	Final Qualification	BSc.
13	Other department (s) involved in teaching the course	None
14	Language of Instruction	English
15	Date of production/revision	2016/2017

16. Course Coordinator: Dr. Khitam A. Alzughoul

Office numbers, office hours, phone numbers, and email addresses should be listed.
Office Hours: S, M, T, Th (12:00-1:00)
E- mail: k.alzghoul@ju.edu.jo Office phone No. : 22260
There are other sections that are taught in Arabic Language. Dr. Mustafa Al Quisi

17. Other instructors:

Office numbers, office hours, phone numbers, and email addresses should be listed.
Dr. Fathi Shaqqour

18. Course Description:

As stated in the approved study plan.
Environment is a science of using a multi-disciplinary and inter-disciplinary perspectives that attempt to explain how life on the Earth is sustained, what leads to environmental problems, and how these problems can be solved. Our understanding of environmental science is developed by adopting the scientific method whereby data is collected by investigation or observation and used to formulate and test hypotheses. The study of environmental sciences is necessary to become more cognizant of the living world, the biotic and abiotic factors, which affect your daily life, and the interrelationships you have with other organisms. Material covered in the class includes global interactions, ecosystems, energy and matter, land, water, atmosphere, and biodiversity.

Lecture, class discussions, presentations, will all be used throughout the year to aid your learning of the major ecological and biological concepts related to Environment

19. Course aims and outcomes:

A- Aims:

1- To learn and to get perspective on the the basics of environment, ecosystems and bio geochemical cycles, and its influencing factors.
2- Learning terms and understanding concepts of the environment and natural resources and hazards (earthquakes, subsidence, Pollution, waste managements
3- Identifying and evaluating global, economic, political, historical, and geographical forces, and analyzing how these forces help shape the past, present, and future
4- To gain appreciation to the interacting parameters those contribute to interchangeable influences between human and the surrounding environment.
5- To acknowledge the Jordanian plans and strategies regarding environment and Energy.

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ...

1. Be familiar with major environmental terms, concepts, principles and ethics,
2. Demonstrate an understanding of the Earth resources, cycles, and hazards (earthquakes, volcanic activity, erosion and mass wasting),
3. Understand different types of pollution and their impacts on human health and resources.
4. Develop awareness of the role of human for better environmental management.
5. Appreciate the role and responsibility of scientists in sustainable development .
6. Develop skills to work effectively in a group and independently.
7. To integrate learning outcomes with community service to raise awareness on environmental issues and to wisely manage our environment

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
- **Course Overview** - Introduction to environmental science: discuss the syllabus, General information,	1	Dr. Khitam	1-7	- Assignment , - Quiz **- First Exam**	Chapter 1

policy & Grading - Major themes, human population Sustainability and carrying capacity.					
- The scientific method and environmental sciences; - How to think about complex systems; - Earth as a living system and life, ecosystems. - Population dynamics and human population, population growth.	2	Dr. Khitam	1-7	- Assignment , - Quiz **- First Exam**	Chapter2-4
- The chemistry of life; biogeochemical cycles, ecosystem cycles (metal and non-metal), - Ecosystems: - Diversity of life; evolution, natural selection,	3	Dr. Khitam	1-7	- Assignment , - Quiz **- First Exam**	Chs 5-7
- Biomes; Biotic provinces, geographical patterns of life, Earth biomes, forests, deserts, wetlands, - The ecology of food production;; soil degradation, soil sustainability	4	Dr. Khitam	1-7	- Assignment , -Quiz **- First Exam**	Ch 8,11 & 12
- Forests and the environment; forestation and deforestation - How the environment affects our health; disease, pollution,	5	Dr. Khitam	1-7	Assignment , -Quiz **- Second Exam**	Ch13 & 15
- Chance & catastrophes; hazards, disasters, - Chance & catastrophes; hazards, disasters, - Energy concepts;	6	Dr. Khitam	1-7	Assignment , -Quiz **- Second Exam**	Ch 16 & 17
- Oil, natural gas and coal - How we obtain and use water,	7	Dr. Khitam	1-7	Assignment , -Quiz **- Second Exam**	Ch 18 & 21

- How we pollute and clean water, - Global warming	8	Dr. Khitam	1-7	Assignment , -Quiz **- Second Exam**	Ch 22 & 23
- Global warming - Air pollution; sources and effects, - Air pollution; sources and effects,	9	Dr. Khitam	1-7	Assignment , -Quiz **- Final Exam**	Ch 23 & 24
- **Second Exam** - The air we breathe indoors; sources, - The air, indoors; sources, symptoms,	10	Dr. Khitam	1-7	Assignment , -Quiz **- Final Exam**	Ch 25
- Mining and environment - Environmental economics;	11	Dr. Khitam	1-7	Assignment , -Quiz **- Final Exam**	Ch 26, 27
- Environmental economics; - Treating wastes	12	Dr. Khitam	1-7	Assignment , -Quiz **- Final Exam**	Ch 27, 29
Revision, and applications	13	Dr. Khitam			Revision
Term Project Submission & Oral Presentations	14	Dr. Khitam	1-7	- Seminar, oral presentation	Term Project Submission
Final Examinations	15	Dr. Khitam	1-7		Final Exams

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:
Power point presentations,
Class Discussion
Website visit,
Watching videos related to topic
Samples
Group Project

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:
1. delivering Assignments
2. Quizzes
3. Reports
4. Exams
5. Seminars
6. solving problems through discussion

23. Course Policies:

A- Attendance policies:
All students are expected to attend all classes and should arrive on time. **Attendance** is essential to learning, be there. Students should maintain discipline and respect one another in both words and action. They are expected to come prepared and participate actively in class discussion. **Be on time**. Active participation is essential to learning.

According to University regulations, the maximum absence allowed is 15% of classes. Makeup exams may be gi accepted excuses. No makeup for non exam work.

B- Absences from exams and handing in assignments on time:

−Following the University rules in this regards: if the student provide a legitimate excuse, then another compensation exam will be given.
A quiz will be given during most lectures (unless an exam is scheduled). Each quiz will be 2-4 questions and based on the previous week's lecture. Quizzes cannot be made up. The lowest quiz grade will be dropped.

Late Assignments
It is essential that papers and other assignments be completed and submitted on time. Once the due date without notice and justification, the submission is not accepted.

C- Health and safety procedures:

Following The University regulations

D- Honesty policy regarding cheating, plagiarism, misbehavior:

If cheating is proven, then student/s, will be showed up upon investigation committee and university's regulation rules. In this regards will be followed.

E- Grading policy: Grades will be calculated based on points accumulated during the semester (40% for the first & second exams and activities). At the end of the semester there will be a comprehensive final exam. This exam will constitute 50% of your final semester grade.
Attendance, Quizzes, Participations & Assignments 10%

- 50% is the least mark to pass.

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

- Library, Internet services for online resources

24. Required equipment:

1. Library

2. Online – internet access

3. Specified samples (rock, soil, water, recycled materials), Maps,

4. Movies of Environmental Impacts.

25. References:

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

B- Botkin, D. B. and E.A Keller : Environmental Science: Earth as a living planet, John Wiley & Sons, Inc., 8th Edition, 2011,

a. http://www.ucmp.berkeley.edu/glossary/gloss5/biome/

C- Cunningham W. P. and Cunningham M. A.2012. Principles of Environmental Science: Inquiry and Applications, 7th edition, The McGraw-Hill Companies, USA: McGraw-Hill

3. Circulated Hand-outs prepared by the instructor.

D- Recommended books, materials, and media:

1. Raven, P.H., and L.R. Berg. 2006. Environment. 6th edition. John Wiley & Sons, Hoboken, N.J. Sold at the University Bookstore.
2. Arms, Karen. 2000. *Environmental Science*. Holt, Rinehart, & Winston; Austin, TX.
3. Cunningham, William and Barbara Woodworth Saigo. 2000. *Environmental Science: A Global Concern*, 6th Ed. McGraw-Hill; New York, NY.
4. Enger, Eldon and Bradley Smith. 2000. *Environmental Science: A Study of Inter relationships*, 7th Ed. McGraw-Hill; New York, NY.
5. Miller, G. Tyler. 2003. *Environmental Science: Working with the Earth*, 9th Ed. Brooks-Cole; Pacific Grove, CA.

26. Additional information:

Name of Course Coordinator: ----Dr. Khitam A. Alzughoul Signature: ----------

Date: ----------

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

Head of Department: --Dr. Ghaleb Jarrar -- Signature: ----------

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

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

Copy to:
Head of Department
Assistant Dean for Quality Assurance

Course File