

AMERICAN UNIVERSITY OF BEIRUT
Faculty of Health Sciences
Department of Environmental Health

ENHL 220
Fundamentals of Environmental Health Sciences

Section 1

Spring 2019-2020

Course Syllabus

Course Description in the Catalogue:

ENHL 220 (3 credits): A course that explores the interdisciplinary nature of environmental health sciences. It explains fundamental scientific concepts relating to the various environmental components and focuses on the relationship between the environment and human health. Using lectures, case studies and critical thinking exercises, the course covers a variety of topics including air, water and soil pollution, energy, waste management, climate change, biodiversity and sustainable development. It also highlights the relationship between population growth, economics, politics, ethics and the environment.

Instructor:

Dr. Joumana A. Nasr

Office: Van Dyck Hall, 4th floor, Room 413

Ext.: 4631

Email: jn16@aub.edu.lb

Office Hours:

Days: Mondays and Wednesdays

Time: from 10.15 till 11.45

Or by appointment

Time & Place of Class Sessions:

Days: Tuesdays and Thursdays

Time: 11.00 – 12.15

Place: Van Dyck Hall – Room: 201

Learning Outcomes:

At the end of this course, students will be able to:

- 1. Recognize the various environmental components, ecological settings and their interactions.
- 2. Explain fundamental scientific concepts relating to the different environmental components
- 3. Describe how the natural environmental systems function
- 4. Understand the relationship between the earth's life support systems and humans
- 5. Identify various environmental problems and risks.
- 6. Describe different preventive and mitigation measures to manage environmental problems
- 7. Explain the determinant factors of sustainable development.
- 8. Analyse critically environmentally problematic situations and propose sound mitigation measures
- 9. Understand ethical perspectives and practices in the various areas of environmental health

Teaching Strategy:

The course material will be presented using LCD projection in class and the lectures will be posted on Moodle after each class session. Moreover, the course includes case studies and critical thinking exercises and receives guest lecturers in order to enhance the learning process. Exams and a drop quiz will be delivered to enhance daily studying and evaluate the students' understanding of the material.

Assessment of the Learning Outcomes:

Course Learning Outcome	Assessment of the Learning Outcome
1. Recognize the various environmental components, ecological settings and their interactions.	Exams, Drop Quiz
2. Explain fundamental scientific concepts relating to the different environmental components	Exams, Drop Quiz
3. Describe how the natural environmental systems function	Exams, Drop Quiz
4. Understand the relationship between the earth's life support systems and humans	Exams
5. Identify various environmental problems and risks.	Exams, Case Study
6. Describe different preventive and mitigation measures to manage environmental problems	Exams, Drop Quiz, Case Study
7. Explain the determinant factors of sustainable development.	Exams
8. Analyse critically environmentally problematic situations and propose sound mitigation measures	Drop Quiz, Case Study

9. Understand ethical perspectives and practices in the various areas of environmental health	Exams
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Course Requirements, Policies & Evaluation:

Students' Background:

Students (sophomores, juniors and seniors) coming from different backgrounds can register this course.

Attendance:

- Attendance will be taken at the beginning or end of every session.
- Students are expected to be in class on time. Any student who is late to class will be considered absent. Any student who leaves class before the end of the session will be considered absent as well.
- A student is responsible for the work done and the announcements made in class during his/her absence.

Evaluation:

- Midterm Exam: 35%
- Final Exam: 45%
- Drop Quizz: 10%
- Attendance: 5%
- Participation (Class participation in discussions and group work): 5%

N.B.

1) Failure to take a scheduled exam will result in a **zero** being recorded for that exam. Make-up opportunities will be given only to students who ask for it and provide a very valid excuse with supportive documents; namely a written medical report from AUB infirmary/hospital. The instructor reserves the right to change the format and the level of difficulty of any make-up exam. Make-up exams must be scheduled within one week of the original examination date.

2) Failure to take the drop quiz will result in a **zero** being recorded on the quiz. **No make-up quizzes will be given** except to students who ask for it and provide a very valid excuse with supportive documents; namely a written medical report from AUB infirmary/hospital. The instructor reserves the right to choose any 2 lectures for the make-up drop quiz.

3) "Students who fail to credit properly ideas or materials taken from another commit plagiarism. Putting your name on a piece of work -any part of which is not yours- constitutes plagiarism, unless that piece is clearly marked and the work from which you have borrowed is fully identified. Plagiarism is a violation of the universities' academic regulations and is subject to disciplinary action" (AUB Catalogue).

4) A drop quiz, including the material of the last two lectures, may be given at any time.

5) Students are responsible for:

- All material covered in class (power point presentations, class notes, critical thinking exercises, case studies, class discussions and movies/documentaries);
- The assigned readings from the textbook (sections, within a chapter, which were explained in class);
- Any additional outside reading or exercise that may be assigned.

Course Drop Date:

The last day for a student to withdraw from this course is **Thursday April 9, 2020**. By that time, any student with a grade below 60 is advised to withdraw.

Code of Conduct:

Based on the rules and regulations of AUB, any attempt of cheating, plagiarism, in class disruption, dishonesty or any misconduct would result in disciplinary actions against the student (Student Code of Conduct, 2019)

Students' Comments on Course Procedures and Policies:

Students' feedback on any aspect of this course is welcomed. It is recommended to submit your comments in writing and then discuss them with me outside class time.

Students with Special Needs:

“AUB strives to make learning experiences accessible for all. If you anticipate or experience academic barriers due to a disability (such as ADHD, learning difficulties, mental health conditions, chronic or temporary medical conditions), please do not hesitate to inform the Accessible Education Office. In order to ensure that you receive the support you need and to facilitate a smooth accommodations process, you must register with the Accessible Education Office (AEO) as soon as possible: accessibility@aub.edu.lb; [+961-1-350000, x3246](tel:+961-1-350000); West Hall, 314”.

Non-Discrimination – Title IX – AUB:

AUB is committed to facilitating a campus free of all forms of discrimination including sex/gender-based harassment prohibited by Title IX. The University's non-discrimination policy applies to, and protects, all students, faculty, and staff. If you think you have experienced discrimination or harassment, including sexual misconduct, we encourage you to tell someone promptly. If you speak to a faculty or staff member about an issue such as harassment, sexual violence, or discrimination, the information will be kept as private as possible, however, faculty and designated staff are required to bring it to the attention of the University's Title IX Coordinator. Faculty can refer you to fully confidential resources, and you can find information and contacts at www.aub.edu.lb/titleix. To report an incident, contact the University's Title IX Coordinator Ms. Mitra Tauk at 01-350000 ext. 2514, or titleix@aub.edu.lb. An anonymous report may be submitted online via Ethics Point at www.aub.ethicspoint.com.

Course Outline:

Session Number	Lecture Number	Day	Date	Topic	Assigned Readings from the Book (possible minor changes in the chapters' numbers depending on the edition)	Corresponding Learning Outcomes
1	----	R	23-1-2020	Syllabus	-----	-----
2	1	T	28-1-2020	Introduction to Environmental Sciences	Chapter 1	1-2-3-4-5-7
3	2	R	30-1-2020	Ecology & Ecosystems	Chapter 3	1-2-3-4-5-6
4	3	T	4-2-2020	Communities, Populations & Species Interaction	Chapters 5 & 4	1-2-3-4-5-6
5	4	R	6-2-2020	Sustaining Biodiversity: The Species Approach	Chapters 9 & 4	1-2-3-4-5-6-7
6	5 & 6	T	11-2-2020	Terrestrial Biomes & Biodiversity AND Sustaining Terrestrial Biomes & Biodiversity	Chapter 7 & Chapter 10	1-2-3-4-5-6-7
7	7	R	13-2-2020	Aquatic Bodies and Biodiversity and Their Sustainability	Chapters 8 & 11	1-2-3-4-5-6-7
8	8	T	18-2-2020	The Human Population & Its Impacts + Critical Thinking Exercise	Chapter 6	4-7
9	9	R	20-2-2020	Food Production, Soil & Agriculture	Chapters 12 & 3	1-2-3-4-5-6-7
10	-----	T	25-2-2020	<i>Case Study: Relating to:</i> Agriculture and Food Security	-----	1-3-5-6
11	-----	R	27-2-2020	TBA	-----	-----
12	-----	T	3-3-2020	MIDTERM EXAM	-----	-----
13	10	R	5-3-2020	Geology & Non-renewable Mineral Resources	Chapter 14	1-2-4-5-6-7
14	11	T	10-3-2020	Renewable & Non-renewable Energy	Chapter 15 & 16	1-2-4-5-6-7
15	12	R	12-3-2020	Environmental Hazards & Human Health	Chapter 17	4-5-6-7
16	13	T	17-3-2020	Water Systems & Availability + Critical Thinking Exercise	Chapters 13 & 20	1-2-3-4-5-6-7
17	14	R	19-3-2020	Water Pollution	Chapters 13 & 20	1-2-3-4-5-6-7
18	15	T	24-3-2020	Wastewater Treatment and Reuse	Chapters 13 & 20	5-6-7
19	16	R	26-3-2020	Air Pollution	Chapter 18	1-2-3-4-5-6-7
20	17	T	31-3-2020	Climate Change & Ozone Depletion	Chapter 19	1-2-3-4-5-6-7
21	18	R	2-4-2020	Solid & Hazardous Waste + Critical Thinking Exercise	Chapter 21	5-6-7
22	19	T	7-4-2020	Environmental Ethics & <i>Case Study: Comprehensive Case Study</i>	-----	5-6-7-8-9
23	-----	R	9-4-2020	<i>Guest Lecturer: The Cost of Environmental Degradation & Politics</i>	-----	5
24	-----	T	14-4-2020	<i>Case Study: Relating to:</i> Wastewater Reclamation & Reuse	-----	2-3-4-6
25	-----	R	16-4-2020	<i>Case Study: Relating to:</i> Solid Waste Management	-----	3-6
26	-----	T	21-4-2020	Documentary Session	-----	5-6
27	-----	R	23-4-2020	TBA	-----	-----
28	-----	T	28-4-2020	TBA	-----	-----
29	-----	R	30-4-2020	TBA	-----	-----

* The Final Exam will be scheduled by the registrar.

* This is the best forecast that I can make for the course. Any changes in the schedule will be announced in class or on Moodle.

*TBA: To be assigned.

Important Notice:

Eating and use of laptops and mobile phones are forbidden in class (during the lectures, quizzes and exams).

Checking the AUB e-mail and Moodle on daily basis is a must. You are responsible for any announcement sent to you by e-mail or posted on Moodle.

Main Reference Textbook:

Tyler Miller, G. & Spoolman, S. (2018). *Living in the Environment* (19th Ed.) Canada: Cengage Learning – National Geographic Learning.

References:**Internet resources**

Information about environmental issues is available on the internet. You are advised to refer to it for further information on any topic discussed in class.

Other sources of information

Many journals and books about environmental issues are available at any of the four major AUB libraries. You are advised to refer to them upon need.

*Enjoy the Semester
&
Good Luck*