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**AMERICAN UNIVERSITY OF BEIRUT**  
**FACULTY OF HEALTH SCIENCES**  
**Department of Environmental Health**  
**Fall 2023-24**

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**ENHL242 (3 cr.): Environmental Management Tools and Applications**  
**(For senior students majoring in Environmental Health)**

**Course Instructor: Dr. May Massoud**

**Office:** Van Dyck, room 415

**Office Hours:** Zoom/WebEx or in person. To set a meeting by appointment (please e-mail at mm35@aub.edu.lb)

**Location and Time:** Tuesday and Thursday: 9:30 - 10:45 am. Van Dyck room 101.

### **Course Description**

Nowadays, many people ask for an “environmental certification” before purchasing a product. In the future, the same set of standards will be used to assess the environmental performance of facilities. The spread of a more systematic approach to environmental protection has increased the demand for professionals who are trained in environmental management. This course provides an overview of the general principles relating to environmental management and the relevant regulations and standards. It will focus on the theory and applications of environmental impact assessment (EIA) and environmental audits. Though the first part of the course is mainly lecture based, your participation in the form of questions and discussion is always welcomed and encouraged. Critical thinking will be promoted throughout the course. To enhance your field work experience and apply the principles and tools you have learned in class, you are requested to conduct an environmental health project. Emphasis is placed on investigating the problem and proposing management strategies.

**This course is taught in a blended format which integrates online and face-to-face (F2F) activities and promotes active learning. Approximately 1/3 of the course learning is online and as such the F2F ‘seat time’ is reduced. This time is replaced by out-of-class collaborative activities including online assignments, case studies and discussion and group projects.**

### **Learning Outcomes**

- LO1. Describe the relationship between environmental management and sustainable development.
- LO2. Plan an EIA study.
- LO3. Design an effective environmental audit program.
- LO4. Critically evaluate information obtained from various sources.
- LO5. Based on field work, study the environmental impacts of a certain facility.
- LO6. Infer the risks/significance of environmental aspects or impacts.
- LO7. Formulate mitigation measures to address environmental impacts.
- LO8. Comprehend the ethical issues/dilemmas in environmental decisions.
- LO9. Write a professional technical report.
- LO10. Communicate effectively the project design and findings through verbal/poster presentation.

## Course Resources

We will be using a set of online resources. Lecture handouts, Voice over PowerPoint presentations and readings will be available on the **course Moodle**.

## Reference Books

Mareddy, A. 2017. Environmental Impact Assessment: Theory and Practice. Elsevier.

Pain, S.W. 2018. Safety, Health, And Environmental Auditing: A Practical Guide. Boca Raton: Taylor & Francis.

You might want to check out scholarly journals for current information. Access to some journals can be attained electronically. ([AUB Homepage](#), [Libraries](#), [Jafet](#), [Engineering and Science](#), [Current Journals](#), [Select a Discipline](#), [Environmental Science](#))

## Course Requirements and Assessment

### Weeks 1 and 2:

- Introduction to course content and requirements.
- Introduction to environmental management.
- You are required to study the reading and lecture material posted in the Content section of the course website.

### Weeks 3 through 6

- Environmental Impact Assessment (EIA): Process; laws, policies, and institutional arrangements for EIA systems; public involvement; health and social aspects of EIA; assessment tools; impact mitigation measures and management; and EIA reporting process.
- You are required to study the reading and lecture material posted in the Content section of the course website.
- Twice during this period, you are required to submit an assignment in the Dropbox.

### Week 7

- EIA Case Study: You will be provided with a comprehensive description of the case study and a detailed rubric for the Discussion.
- Synchronous session to clarify and elucidate conflict raising issues or key concepts that had not been correctly explained.

### Weeks 8 through 10

- Principles of environmental audits: Environmental audit standards/ISO 14000 series; types of environmental audits and their application to environmental protection and performance improvement; and stages of environmental audit (pre-audit, audit, and post-audit stage).
- You are required to study the reading and lecture material posted in the Content section of the course website.

- During this period, you are required to post to the Discussion forum answering questions that assess your understanding of the course material and to respond to at least one post.
- You will be provided with a detailed rubric for the Discussion.

### Week 11

- Exam covering the material discussed from the beginning of the semester.
- Exam correction session.

### Week 12

- Environmental Audit Case Study: You will be provided with a comprehensive description of the case study and a detailed rubric for the Discussion.
- Synchronous session to clarify and elucidate conflict raising issues or key concepts that had not been correctly explained.

### Weeks 10 through 14

- Community based project: You are requested to conduct a community based environmental health project (either EIA or audit). Emphasis is placed on investigating the problem and proposing management strategies.
- You are required to work in groups of 3. You will be provided with a list of skills needed in a group. Accordingly, you will identify each other and decide on roles.
- Group members are required to assess one another's work.
- Each group should choose a location or facility where they want to conduct their field work and get the approval of the concerned authorities.
- You should develop a list of relevant keywords and note down which keywords best identify relevant resources and explain why.
- You should search for at least three related credible websites, two journal articles, two books, and two government documents related to your project.
- A discussion forum will be available for each group for brainstorming and discussion. By means of the discussion forum you are required to discuss the process of conducting your field work. The participation of the group members in the discussion forum is very essential as it reflects your level of involvement in the project.
- You should submit an outline (draft action plan) of your project with a list of references before starting your field work.
- You are required to write a report and to submit it in the Dropbox. You will be provided with a detailed rubric for report evaluation.
- You are required to submit a draft copy of the report a week before the deadline for general feedback.
- You are required to submit a one-page reflection on the field experience.
- You should post your presentation online in advance so that everyone can see it, post their questions and prepare for the oral presentation. You will be provided with a detailed rubric for grading oral presentations.

## Week 15

- Poster/Oral presentation.

### Assessment of Student Performance

Table 1. Assessment methods mapped to course Learning Objectives

Mode of Assessment of Students	Learning Objectives									
	LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9	LO10
Assignments (A total of 4, each 5%)	X	X	X					X		
Case study I (5%)		X	X			X	X			
Case study II (5%)			X			X	X	X		
Exam (20%)	X	X	X		X					
Written report (20%)			X	X	X	X	X	X	X	
Poster/Oral presentation (15%)			X	X	X	X	X	X	X	X
Reflection (7%)	X							X		
Class Participation (8%)	X	X	X			X	X	X		

Exams may include multiple choice, true/false, short answer/short essay questions and/or case studies.

**Criteria for marking your written reports, oral presentations and discussion forums are given in appendices A, B and C (Moodle site).**

Appendix D (Moodle site) helps you understand what constitutes an act of plagiarism. Appendix E (Moodle site) contains instructions on report formats for this course. While reports can be written in many formats and there is nothing sacred about the template given here, it is important that you learn how to follow a given format (for journals, conferences etc.).

### Course Policies

#### Team work

Working in a team is of great importance among multidisciplinary professionals. It requires communication and interpersonal skills, good coordination and project management. You should always do your share in partner or group work.

#### Assignments

You are expected to submit assignments on time. Late assignments will be penalized by a reduction in grade and should be submitted the following session. You should have a valid reason as determined by the instructor for not submitting the assignment on time.

## Exams

You are expected to take exams on scheduled time. Failure to take a scheduled exam will result in a zero. Make-up exams may be given to students who provide a valid reason and supporting documentation as determined by the instructor. The instructor reserves the right to change the format and increase the level of difficulty on any make-up exam. Make-up exams must be scheduled within one week of the original examination date.

## Withdrawal

The last day for a student to withdraw from this course is **Friday Nov. 17, 2023**. Any student with an average grade below 60, by that date, is recommended to consult with his/her academic advisor and may consider withdrawing from the course.

## Code of Conduct

Education is demanding and time management is essential. Do not hesitate to use the resources around you but do not cut corners. Cheating and plagiarism will not be tolerated. Please review the Student Code of Conduct in your handbook and familiarize yourself with definitions and penalties (AUB home page, [www.aub.edu.lb](http://www.aub.edu.lb); policies and procedures; Student Handbook). If you're in doubt about what constitutes plagiarism, ask your instructor because it is your responsibility to know. The American University of Beirut has a strict anti-cheating and anti-plagiarism policy. Penalties include failing marks on the assignment in question, suspension or expulsion from University and a permanent mention of the disciplinary action in the student's records.

## Netiquette

- Your responses to the discussion questions should be constructive, relevant and straightforward, direct to the point, and demonstrate understanding of the topic.
- Respect other people's opinion and be tactful in responding.
- Think before you write, reread before you post and do not use slang language.
- Treat others the way you would like them to treat you.

## Class Conduct

You are expected to be respectful of other peers and the instructor at all times. For more information please review all rules and regulations set forth in the current edition of the Student Code of Conduct (AUB home page, [www.aub.edu.lb](http://www.aub.edu.lb); policies and procedures; Student Handbook).

## Communication via email

Announcements will be made in lectures as required. I will be sending all communication via Moodle to your AUB email accounts. All students should check their AUB email on a regular basis, as this is a primary means of communication for the course. You are responsible for any missed information in class or via email.

## Course Evaluation

At the end of the semester you will be asked to fill a course evaluation form. Your objective opinion is highly solicited to get accurate data.

## Students' Comments about Course Policies and Procedures

I welcome and encourage students' comments concerning any aspect of this course. It is recommended to submit your comments first in writing and discuss them with me outside of class time.

### **Students with Special Needs**

AUB strives to make learning experiences as accessible as possible. If you anticipate or experience academic barriers due to a disability (including mental health, chronic or temporary medical conditions), please inform me immediately so that we can privately discuss options. In order to help establish reasonable accommodations and facilitate a smooth accommodations process, you are encouraged to contact the Accessible Education Office: [accessibility@aub.edu.lb](mailto:accessibility@aub.edu.lb); +961-1-350000, x3246; West Hall, 314.

### **Non-Discrimination and Anti-Discriminatory Harassment, including Sexual Harassment at AUB**

In line with its commitment to the principle of equal opportunity in education and employment, AUB policies protect you from discrimination on the basis of protected characteristics, including discriminatory harassment and sexual harassment. Protected characteristics include: race, color, religion, age, national or ethnic identity, sex, gender or gender identity, sexual orientation, pregnancy, marital status, disability, genetic predisposition or carrier status, alienage or citizenship status, and political affiliation.

The policies are applicable to all the AUB Community including: officers, faculty, staff, academic appointees, students (including medical interns and residents), visiting students, alumni, trainees, visitors, contractors, subcontractors, suppliers, located on campus and at AUB Medical Center, Advancing Research Enabling Communities Center (AREC), or any other facility or program affiliated with the University. The "AUB community" also includes the dependents and domestic employees of faculty and staff dwelling on campus and at AREC.

If you think you have experienced discrimination, discriminatory harassment, or sexual harassment, we encourage you to inform the Equity/Title IX Coordinator, Mitra Tauk at 01-350000 ext. 2514, [titleix@aub.edu.lb](mailto:titleix@aub.edu.lb), report to a Title IX deputy at your faculty or at any other faculty ([www.aub.edu.lb/titleix](http://www.aub.edu.lb/titleix)), or report online ([www.aub.ethicspoint.com](http://www.aub.ethicspoint.com)). Reports may be submitted anonymously or not. Please know that the University will maintain the confidentiality of the complaint and privacy of the persons involved to the greatest extent possible, consistent with its goal of conducting a thorough and complete investigation and to the extent permitted by law.

You need to also know that the University has designated academic and administrative department/unit heads, managerial level staff, academic advisors, protection officers, and residence hall staff/monitors, as responsible employees or "mandatory reporters", and may designate others at its discretion. These individuals are obligated to report actual or suspected discrimination or discriminatory harassing conduct to the Equity/Title IX Coordinator, unless they are a "confidential" resource. The following have been designated as confidential resources: on campus counselors in the Counseling Center of the Office of Student Affairs and AUB Medical Center counselors, and healthcare providers at the University Health Services (UHS) and at the AUB Medical Center. Confidential resources are not required to report actual or suspected discrimination or harassment to appropriate university officials, except in cases of suspected abuse of a minor, in the event of an external investigation or prosecution, or in the event of imminent danger to the reporting party or others.

**Course Plan\***

<b>Date</b>	<b>Topic/Assignment</b>
Aug. 29	Course content and requirements
Aug. 31	Introduction to environmental management
Sept. 05	Introduction to environmental management (Cont'd)
Sept. 07	Environmental Impact Assessment: Introduction/Overview
Sept. 12	EIA process
Sept. 14	EIA process: Assessment tools
Sept. 19	Assignment I/ Impact mitigation measures and management
Sept. 21	EIA reporting process
Sept. 26	Assignment II/ EIA Process in Lebanon
Sept. 28	Principles of environmental audits
Oct. 03	Assignment III/ Types of environmental audits and their application to environmental protection and performance improvement
Oct. 05	Case Study I
Oct. 10	Stages of environmental audit
Oct. 12	TOR
Oct. 17	Assignment IV
Oct. 19	Project Discussion
Oct. 24	Case Study II
Oct. 26	Reflection
<b>Oct. 31</b>	<b>Exam I</b>
Nov. 02	Exam correction
<b>Nov. 09</b>	<b>Deadline for submitting the reflection paper</b>
<b>Nov. 14</b>	<b>Deadline for submitting the first draft of the report</b>
<b>Nov. 16</b>	<b>Feedback on the first draft of the report</b>
<b>Nov. 23</b>	<b>Oral Presentations</b>
<b>Nov. 28</b>	<b>Oral Presentations/Final Report</b>

*Enjoy the course!*

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\* The following is a general outline of material to be covered during the semester.

Note: the schedule is subject to changes in response to progress and opportunities that may arise in a given semester. Any changes to the schedule will be announced in class and via Moodle to your AUB email accounts.