

COURSE INFORMATION

Course Name: Occupational and Environmental Health اسم المساق: الصحة المهنية والبيئية Course Code: HLTH 1302 Course level: Undergraduate	Semester: First Semester 2019-2020 Course offered by: ICPH
Day(s) and Time(s): Monday and Wednesday, 10:00 – 11:30 Classroom: Said Khoury Building, first floor	Credit Hours: 3 Prerequisites: None

COURSE DESCRIPTION

This course will focus on the interaction between humans and the environment, including workplace environment, and how this interaction affects the health of individuals and communities. It includes an overview of the physical, chemical and biological hazards found in the environment and the health risks associated with workplace and community exposure to them. Major global environmental and occupational health issues, and specific issues in Palestine, will be discussed, as well as the approaches taken to address them, and the challenges that must be overcome to ensure success in dealing with them. This is a 3 credit hour course, with no prerequisite courses.

التفاعل بين الانسان و البيئة بما في ذلك بيئة العمل أو البيئة المهنية وكيف يمكن ان يؤثر هذا التفاعل على صحة الافراد و المجتمعات. لمحة عامة عن المخاطر الفيزيائية و الكيميائية و الحيوية الموجودة في البيئة، و المخاطر الصحية الناتجة عن التعرض لها في مكان العمل او في المجتمع. مناقشة قضايا الصحة المهنية و البيئية العالمية، و التركيز على القضايا الخاصة في فلسطين. مناقشة المناهج المتبعة لمعالجتها، و الصعوبات التي يجب التغلب عليها لضمان النجاح في التعامل معها. يطرح المساق من خلال المحاضرات و النقاشات و التعلم المبني على حل المشكلات. عدد ساعات المساق هو 3 ساعات معتمدة، ولا يوجد له متطلبات سابقة.

FACULTY INFORMATION

Instructor:	Dr. Maysaa Nemer.
Office Location:	Said Khoury Development Studies Building, 1 st floor
Office Hours:	Monday and Wednesday, 12:00 – 13:30
Telephone:	02-2982020 - 2096
E-Mail:	mnemer@birzeit.edu

REFERENCES AND LEARNING RESOURCES

Required Textbook:

Robert H. Friis. Essentials of Environmental Health. Second edition. Jones & Bartlett Learning, 2012. ISBN: 978-0-7637-7890-3.

Optional Readings:

- Barry S. Levy, David H. Wegman, Sherry L. Baron, and Rosemary K. Sokas. Occupational and Environmental Health. Seventh edition. Oxford, 2018. ISBN: 978-0-19-066267-7
- Howard Frumkin. Environmental Health. From Global to Local. Second edition. Jossey-Bass, 2010. ISBN: 978-1-8531-5933-6.

Useful Web Resources:

- United Nations Framework Convention on Climate Change: www.unfccc.int
- Middle East Health, Safety, Environment & Sustainable Development Conference & Exhibition (MEHSE): www.spe.org/events/mehse/2014/index.php
- Union of Concerned Scientists, Global Warming: www.ucsusa.org/global_warming/
- Climate Hot Map: www.climatehotmap.org
- WHO, Environmental Health: www.who.int/topics/environmental_health/en/
- WHO, EMRO, Regional Centre for Environmental Health Action: www.emro.who.int/entity/ceha/index.html
- United Nations Environment Programme: www.unep.org
- EcoMENA: www.ecomena.org
- The International Commission on Occupational Health: <http://www.icohweb.org/site/homepage.asp>
- The International Labor Organization: <https://www.ilo.org/global/lang--en/index.htm>

COURSE OBJECTIVES

The objectives of this course are:

1. To introduce key definitions, concepts and epidemiologic tools used in environmental and occupational health.
2. To describe main agents of occupational and environmental disease.
3. To discuss the link between population health and the physical, biological and chemical environment both at the workplace and at the general environment.
4. To discuss ethical dilemmas of relevance to the field of occupational and environmental health and disease.

5. To present main controversies within the field with emphasis on climate change and global warming.
6. To describe the role of key national and international agencies and public policies for occupational and environmental health and disease.

LEARNING OUTCOMES

By the end of this course, a student will be able to:

1. Explain main concepts and definitions used within the field of occupational and environmental health.
2. Describe and utilize basic epidemiologic tools in assessing burden of environmental disease.
3. Identify main sources of environmental and occupational hazards, the ways in which humans are exposed to them and the major human health effects from exposure to these hazards.
4. Explain the link between main physical, biological and chemical agents within the environment and population health with focus on water and air quality, food safety, waste management, occupational health, injuries and degradation of natural resources.
5. Describe and discuss main ethical dilemmas with focus on balancing population growth, consumerism and conservation of a healthy environment.
6. Explain main controversies within the field of environmental health with emphasis on debates related to climate change and global warming.
7. Provide examples of national and international agencies and policies regulating environment health.
8. Discuss strategies for decreasing the burden of diseases caused by occupational and environmental risks factors.
9. Analyse the nature of environmental and occupational health problems in broader context through systematic research using scientific literature, press sources, and consultations with key persons, organizations, and agencies.
10. Discuss local history, community demographics, cultural, political, and administrative issues, and their impact on environmental or occupational health issues and solutions.

DELIVERY METHODS

The course will be delivered through a combination of learning strategies. These will include:

- PowerPoint lectures and active classroom based discussions.
- Case examples, discussions and demonstrations.
- Classroom group work and presentations.
- Periodic assignments.
- Videos.
- Presentations by guest lecturers.

COURSE REGULATIONS

Participation

Class participation and attendance are important elements of every student's learning experience, and the student is expected to attend all classes. A student should not miss more than 7 of the classes during a semester. *Those exceeding this limit of 7 sessions will receive a failing grade regardless of their performance.* It is a student's responsibility to monitor the frequency of their own absences. **Attendance record begins on the first day of class irrespective of the period allotted to drop/add and late registration.**

In exceptional cases, the student, with the instructor's prior permission, could be exempted from attending a class provided that the number of such occasions does not exceed the limit allowed by the University. The instructor will determine the acceptability of an absence for being absent. A student who misses more than 3 of classes and has a valid excuse for being absent will be allowed to withdraw from the course.

Plagiarism

Plagiarism is considered a serious academic offence and can result in your work losing marks or being failed. Birzeit University expects its students to adopt and abide by the highest standards of conduct in their interaction with their professors, peers, and the wider University community. As such, a student is expected not to engage in behaviours that compromise his/her own integrity as well as that of Birzeit University.

Plagiarism includes the following examples and it applies to all student assignments or submitted work:

- Use of the work, ideas, images or words of someone else without his/her permission or reference to them.
- Use of someone else's wording, name, phrase, sentence, paragraph or essay without using quotation marks.
- Misrepresentation of the sources that were used.

The instructor has the right to fail the coursework or deduct marks where plagiarism is detected

Late or Missed Assignments

In all cases of assessment, students who fail to attend an exam, class project or deliver a presentation on the scheduled date without prior permission, and/or are unable to provide a medical note, will automatically receive a fail grade for this part of the assessment.

Submitting a term paper on time is a key part of the assessment process. Students who fail to submit their work by the deadline specified will automatically receive a 10% penalty. Assignments handed in more than 24 hours late will receive a further 10% penalty. Each subsequent 24 hours will result in a further 10% penalty.

In cases where a student misses an assessment on account of a medical reason or with prior permission; in line with University regulations an incomplete grade for the specific assessment will be awarded and an alternative assessment or extension can be arranged.

COURSE ASSESSMENT

Course Calendar and Assessment

Students will be graded through the following means of assessment and their final grade will be calculated from the forms of assessment as listed below with their grade weighting taken into account.

A minimum of 60% is required to pass an undergraduate level course at Birzeit University.

Assessment	Grade Weighting (%)	Deadline Assessment
Quizzes and small assignments	5	All semester
Midterm Exam	30	Week 8
Assignment – writing a briefing paper	20	Week 14
Final Exam	40	Final Exam week
Class Performance Assessment	5	All semester
Total	100	

CONTENT DISTRIBUTION

WEEK	CLASS TOPICS	READINGS
WEEK 1	<p>LECTURE 1: COURSE INTRODUCTION WHAT IS ENVIRONMENTAL HEALTH?</p> <p>LECTURE 2: COMMON CONCEPTS IN ENVIRONMENTAL HEALTH</p>	<p>COURSE SYLLABUS</p> <p>HOWARD FRUMKIN. INTRODUCTION TO ENVIRONMENTAL HEALTH, IN FRUMKIN H, ENVIRONMENTAL HEALTH. FROM GLOBAL TO LOCAL, CHAPTER 1.</p>

	SCIENCE.	
WEEK 2	<p>LECTURE 3:</p> <p>INTRODUCTION: OUR ENVIRONMENT AT RISK.</p> <p>LECTURE 4:</p> <p>KEY DEFINITIONS, CONCEPTS AND TOOLS IN ENVIRONMENTAL AND OCCUPATIONAL EPIDEMIOLOGY.</p>	<p>FRIIS RH. INTRODUCTION: THE ENVIRONMENT AT RISK, IN FRIIS RH, <i>ESSENTIALS OF ENVIRONMENTAL HEALTH</i>, CHAPTER 1.</p> <p>FRIIS RH. ENVIRONMENTAL EPIDEMIOLOGY, IN FRIIS RH, <i>ESSENTIALS OF ENVIRONMENTAL HEALTH</i>, CHAPTER 2.</p> <p>HOWARD FRUMKIN. ENVIRONMENTAL AND OCCUPATIONAL EPIDEMIOLOGY, IN FRUMKIN H, <i>ENVIRONMENTAL HEALTH. FROM GLOBAL TO LOCAL</i>, CHAPTER 4.</p>
WEEK 3	<p>LECTURE 5:</p> <p>ENVIRONMENTAL TOXICOLOGY AND DISEASE.</p> <p>LECTURE 6:</p> <p>OCCUPATIONAL AND ENVIRONMENTAL HYGIENE.</p>	<p>FRIIS RH. ENVIRONMENTAL TOXICOLOGY, IN FRIIS RH, <i>ESSENTIALS OF ENVIRONMENTAL HEALTH</i>, CHAPTER 3.</p> <p>BARRY S. OCCUPATIONAL AND ENVIRONMENTAL HYGIENE, IN BARRY S, <i>OCCUPATIONAL AND ENVIRONMENTAL HEALTH</i>, CHAPTER 8.</p>
WEEK 4	<p>LECTURE 7:</p> <p>ENVIRONMENTAL POLICY AND REGULATION.</p> <p>LECTURE 8:</p> <p>EXPOSURE SCIENCE: RISK ASSESSMENT.</p>	<p>FRIIS RH. ENVIRONMENTAL POLICY AND REGULATION, IN FRIIS RH, <i>ESSENTIALS OF ENVIRONMENTAL HEALTH</i>, CHAPTER 4.</p> <p>BARRY S. THE ROLES OF GOVERNMENT IN PROTECTING AND PROMOTING OCCUPATIONAL AND ENVIRONMENTAL HEALTH, IN BARRY S, <i>OCCUPATIONAL AND ENVIRONMENTAL HEALTH</i>, CHAPTER 3.</p> <p>HOWARD FRUMKIN. EXPOSURE SCIENCE, INDUSTRIAL HYGIENE AND EXPOSURE ASSESSMENT, IN FRUMKIN H, <i>ENVIRONMENTAL HEALTH. FROM GLOBAL TO LOCAL</i>, CHAPTER 8.</p> <p>LIOY, P. J., & RAPPAPORT, S. M. EXPOSURE SCIENCE AND THE EXPOSOME: AN OPPORTUNITY FOR</p>

		<p><u>COHERENCE IN THE ENVIRONMENTAL HEALTH SCIENCES. ENVIRONMENTAL HEALTH PERSPECTIVES</u>, 119(11), 2011.</p>
WEEK 5	<p>LECTURE 9: AGENTS OF ENVIRONMENTAL DISEASE: ZONOTIC AND VECTOR-BORNE DISEASES (PART 1).</p> <p>LECTURE 10: AGENTS OF ENVIRONMENTAL DISEASE: ZONOTIC AND VECTOR-BORNE DISEASES (PART2).</p>	<p>FRIIS RH. <u>ZONOTIC AND VECTOR-BORNE DISEASES</u>, IN FRIIS RH, ESSENTIALS OF ENVIRONMENTAL HEALTH, CHAPTER 5.</p> <p>WEBSITES TO EXPLORE:</p> <p>WWW.WHO.INT</p> <p>WWW.CDC.GOV</p> <p>WWW.ECOMENA.ORG</p>
WEEK 6	<p>LECTURES 11&12: AGENTS OF ENVIRONMENTAL DISEASE: TOXIC METALS AND ELEMENTS.</p>	<p>FRIIS RH. <u>TOXIC METALS AND ELEMENTS</u>, IN FRIIS RH, <i>ESSENTIALS OF ENVIRONMENTAL HEALTH</i>, CHAPTER 6.</p>
WEEK 7	<p>LECTURES 13&14: AGENTS OF ENVIRONMENTAL DISEASE: PESTICIDES AND OTHER ORGANIC CHEMICALS.</p>	<p>FRIIS RH. <u>PESTICIDES AND OTHER ORGANIC CHEMICALS</u>, IN FRIIS RH, <i>ESSENTIALS OF ENVIRONMENTAL HEALTH</i>, CHAPTER 7.</p>
WEEK 8	<p>LECTURE 15: MIDTERM EXAM</p>	

	LECTURE 16: AGENTS OF ENVIRONMENTAL DISEASE: IONIZING AND NONIONIZING RADIATION.	FRIIS RH. <u>IONIZING AND NONIONIZING RADIATION</u> , IN FRIIS RH, <i>ESSENTIALS OF ENVIRONMENTAL HEALTH</i> , CHAPTER 8.
WEEK 9	LECTURES 17&18: APPLICATIONS OF ENVIRONMENTAL HEALTH: WATER QUALITY.	FRIIS RH. <u>WATER QUALITY</u> , IN FRIIS RH, <i>ESSENTIALS OF ENVIRONMENTAL HEALTH</i> , CHAPTER 9. HOWARD FRUMKIN. <u>WATER AND HEALTH</u> , IN FRUMKIN H, ENVIRONMENTAL HEALTH. FROM GLOBAL TO LOCAL, CHAPTER 16. BARRY S. <u>WATER CONTAMINATION</u> , IN BARRY S, OCCUPATIONAL AND ENVIRONMENTAL HEALTH, CHAPTER 16.
WEEK 10	LECTURE 19: APPLICATIONS OF ENVIRONMENTAL HEALTH: AIR QUALITY (INDOOR AIR QUALITY). LECTURE 20: APPLICATIONS OF ENVIRONMENTAL HEALTH: AIR QUALITY (AMBIENT AIR QUALITY).	FRIIS RH. <u>AIR QUALITY</u> , IN FRIIS RH, <i>ESSENTIALS OF ENVIRONMENTAL HEALTH</i> , CHAPTER 10. HOWARD FRUMKIN. <u>AIR POLLUTION</u> , IN FRUMKIN H, ENVIRONMENTAL HEALTH. FROM GLOBAL TO LOCAL, CHAPTER 13. BARRY S. <u>AIR POLLUTION</u> , IN BARRY S, OCCUPATIONAL AND ENVIRONMENTAL HEALTH, CHAPTER 15.
WEEK 11	LECTURE 21: APPLICATIONS OF ENVIRONMENTAL HEALTH: FOOD SAFETY LECTURE 22: EXERCISES IN CLASS: FOOD SAFETY IN PALESTINE – RISKS AND STRATEGIES (GUEST LECTURER)	FRIIS RH. <u>FOOD SAFETY</u> , IN FRIIS RH, <i>ESSENTIALS OF ENVIRONMENTAL HEALTH</i> , CHAPTER 11. HOWARD FRUMKIN. <u>FOOD SYSTEMS, THE ENVIRONMENT AND PUBLIC HEALTH</u> , IN FRUMKIN H, ENVIRONMENTAL HEALTH. FROM GLOBAL TO LOCAL, CHAPTER 19. BARRY S. <u>FOOD SAFETY</u> , IN BARRY S, OCCUPATIONAL AND ENVIRONMENTAL HEALTH, CHAPTER 17.
WEEK 12	LECTURES 23 & 24: APPLICATIONS OF	FRIIS RH. <u>SOLID AND LIQUID WASTES</u> , IN FRIIS RH, <i>ESSENTIALS OF ENVIRONMENTAL HEALTH</i> , CHAPTER

	ENVIRONMENTAL HEALTH: WASTE MANAGEMENT (SOLID & LIQUID WATSE)	12. HOWARD FRUMKIN. SOLID AND HAZARDOUS WASTE , IN FRUMKIN H, ENVIRONMENTAL HEALTH. FROM GLOBAL TO LOCAL, CHAPTER 17. BARRY S. HAZARDOUS WASTE , IN BARRY S, OCCUPATIONAL AND ENVIRONMENTAL HEALTH, CHAPTER 18.
WEEK 13	LECTURE 25: OCCUPATIONAL HEALTH LECTURE 26: INJURIES AND OCCUPATIONAL SAFETY	FRIIS RH. OCCUPATION HEALTH , IN FRIIS RH, <i>ESSENTIALS OF ENVIRONMENTAL HEALTH</i> , CHAPTER 13. BARRY S. INJURIES AND OCCUPATIONAL SAFETY , IN BARRY S, OCCUPATIONAL AND ENVIRONMENTAL HEALTH, CHAPTER 19.
WEEK 14	LECTURE 27 & 28 : OCCUPATIONAL HEALTH – EXPERIENCE FROM THE FIELD	FRIIS RH. INJURIES WITH A FOCUS ON UNINTENTIONAL INJURIES AND DEATHS , IN FRIIS RH, <i>ESSENTIALS OF ENVIRONMENTAL HEALTH</i> , CHAPTER 14. OCCUPATIONAL HEALTH: A MANUAL FOR PRIMARY HEALTH CARE WORKERS. WHO, 2001. HTTP://WWW.WHO.INT/OCCUPATIONAL_HEALTH/PUBLICATIONS/EMHEALTHCAREWORK/EN/ PALESTINE LABOUR LAW
WEEK 15	LECTURE 29 & 30: ENVIRONMENTAL & OCCUPATIONAL HEALTH IN PAESTINE	OCCUPATIONAL SAFETY AND HEALTH COUNTRY PROFILE. THE PALESTINIAN NATIONAL CENTER OF OCCUPATIONAL SAFETY, HEALTH AND ENVIRONMENTAL PROTECTION. HTTPS://COSHEP.PPU.EDU/EN
WEEK 16	LECTURE 31: THE WAY FORWARD, COURSE FEEDBACK,	

Q&A

**LECTURE 32: REVISION FOR THE
FINAL EXAM**

RUBRIC

Briefing Paper

The length of the briefing paper is 1,500-2,000 words excluding title page, list of content and references. Please use font size 12 and 1.5 spacing between lines. The briefing paper should be based on group collaboration but written individually. Groups should consist of between 3-5 students. Submission is electronic. Each text will be checked for plagiarism.

The briefing paper should be on a selected environmental/occupational health issue in Palestine. An introduction of the background and importance of the issue should be provided describing the current situation; the issue or challenge should be presented and discussed, and a description of the strategies that needed to be adopted to address these challenges and to improve the situation should be provided and discussed.

The briefing paper will be graded using the rubric listed below which gives a total mark out of 20 points.

CRITERIA	Excellent (4 points)	Good (3 points)	Acceptable (2 points)	Does not meet Expectations (1 point)	Score
Structure	Structure is clear and enhances readability; titles and paragraphs used convincingly to support the structure of the text	Structure is mostly clear; titles and paragraphs used appropriately	Structure mostly clear but less convincing; some titles and paragraphs used	Unclear structure; little or no use of titles and paragraphs	
Sources	Excellent and varied use of	Appropriate materials and	Less use of materials and	Little or insecure use of materials	

	appropriate materials and sources including other sources than the textbook	sources used; less creativity in selection of materials and sources	sources; concerns about quality of sources used	and sources; use of inappropriate materials and sources	
Writing	Well written and organized; clear; easy to follow	Writing is mostly clear and understandable; reasonably easy to follow	Adequately written and organized but less secure; less easy to follow	Poorly written and organized; unclear; hard to follow	
Content	Answers all aspects of assignment given in a convincing manner; topic adequately covered in depth; convincing arguments made and innovative conclusions drawn	Adequately answers all aspects of assignment given; good arguments presented and conclusions drawn	Adequate answers to some but not all aspects of the assignment; less secure argumentation and less convincing conclusions made	Superficial treatment of one or more aspects of the assignment; incorrect information presented	
Style and presentation	Reasonable length (between 1,500-2,000 words); fluently written throughout; adequate punctuation and spelling; correct in-text referencing and citation style followed	Reasonable length (between 1,500-2,000 words); fluently written overall; adequate punctuation and spelling; secure in-text referencing and citation style	Reasonable length (between 1,500-2,000 words); less fluently written; some mistakes in punctuation and spelling; some mistakes in-text referencing and citation style	Too short (<1,500 words) or too long (>2,000 words); difficult to read, incorrect punctuation and spelling; no references or incorrect in-text referencing and citation style	
				TOTAL POINTS (OUT OF 20):	