

Upper Iowa University External Degree Program

BIO 161-07 Introduction to Environmental Science

COURSE DESCRIPTION:

The purpose of this course is to acquaint students with the physical, ecological, social and political principles of environmental science, and how the scientific method is used to analyze and understand the relation between humans and the natural environment. Note: May not be taken by students who have completed BIO 203. Same as ES 161. Three semester credits.

REQUIRED COURSE MATERIALS:

1. Text: Environmental Science: A Global Concern, Ninth Edition, by W.P. Cunningham, M. A. Cunningham, and B.W. Saigo, McGraw Hill Higher Education, ISBN-10 = 0-07-321881-2
2. Publication Manual of the American Psychological Association (APA guidelines), 5th edition. You should have this manual for reference in all UIU classes. You only need to purchase one copy for all classes.
3. Syllabus (this is it!)

You may purchase your textbook through MBS Direct by calling their toll free number at: 800-325-3252 or through the UIU homepage: www.uiu.edu. Click on the link for current students then select order textbooks from the options in the left hand column. Follow the link and select External Degree for your location.

WRITING PROFICIENCY:

It is recommended that all papers and research are done in the APA style. We expect appropriate writing skills of proper grammar, punctuation, sentence structure, paragraph development, and logical sequence of thought in all written work, and exams.

It is recommended that all students purchase the APA guide/manual listed on the UIU website. *Publication Manual of the American Psychological Association*. \$27.00 new.

CITATION:

Encyclopedias of any kind, including the very popular Wikipedia, are not primary sources and should not be cited or used in constructing academic papers at the graduate or undergraduate level. They can, however, be useful to help gather some background information and to point the way to more reliable sources.

COURSE OBJECTIVES:

1. Describe the interrelationships between humans and the environment and the impact of human activity on the environment.
2. List and explain the basic ecological principles of energy, flow and nutrient cycling.
3. Discuss the interaction of biodiversity, speciation, and extinction on the environment.
4. Explain the principles of ecological succession and their relationship to stability in the environment.
5. Recognize the impact of climate on the world's biomass.
6. Describe carrying capacity and reproductive strategies in diverse organisms.
7. Discuss the impact of current relevant topics related to environmental science.
8. Recognize factors that contribute to environmental pollution and the physical, as well as financial, aspects of environmental protection
9. Students will understand the scientific method and how it is applied in natural sciences.
10. Students will be able to define "environmental science."
11. Students will gain an appreciation for the dependence of humans on the Earth and earth systems and understand human impacts on the natural world.
12. Students will be introduced to current environmental concerns and issues.
13. Students will understand and be able to describe how ethical and cultural perspectives may influence environmental problem solving.
14. Students will be introduced to the fundamental concepts of living and non-living systems and understand the flow of energy and matter through earth systems.
15. Students will be introduced to the global patterns of life, including the evolution of species, biological communities, biomes, and population biology fundamentals.
16. Students will learn the characteristics of the major terrestrial biomes and major marine ecosystems, and understand the factors controlling their distribution.
17. Students will understand the factors that control biological populations.
18. Students will understand the factors that influence human populations and the current status of Earth's human population.
19. Students will understand the basic concepts of environmental health and toxicology.
20. Students will understand the resources required to support agriculture and the human food supply.
21. Students will understand the benefits and drawbacks of the use of chemical pesticides to control disease or support agriculture.
22. Student will understand the concept of biodiversity, and its effects on the stability of ecosystems.
23. Students will understand land use practices and their effect on both ecology and human ways of life.
24. Students will understand the concepts and basic practices of conservation, restoration and ecosystem management.
25. Students will understand the importance of earth resources, economic geology and geological hazards.
26. Students will be introduced to basic concepts concerning the atmosphere and natural cycles of weather and climate patterns, and the causes of air pollution.
27. Students will be introduced to the concepts of water resources, water use, and water management, and the causes of water pollution.

28. Students will understand conventional and renewable energy resources, and their benefits and drawbacks.
29. Students will understand the basic concepts of waste disposal, including solid, toxic and hazardous wastes.
30. Students will understand the process of urbanization and development, and trends in ecology and economics, including new business models that support sustainable development.
31. Students will be introduced to environmental policy, law and planning.
32. Students will understand the importance of environmental education in addressing current and future environmental issues.

COURSE OVERVIEW:

The text contains an introduction called “Learning to Learn” and 25 numbered chapters. The course consists of four homework assignments (Units 1, 2, 4 and 5), one term paper (unit 3), and three exams (Exams I, II, and III), for a total of eight graded items. Each item has equal weight in computing your course grade.

Each of the homework assignments covers assigned readings from the text and contains a set of questions for you to answer. These questions are designed to help you focus on the most important concepts in the lesson.

Each homework assignment is worth 100 points, and contains 25 questions. Try to answer the questions in your own words, rather than copying the answer directly from the text. For each homework assignment (called a “Unit”), briefly preview the questions you will be answering for the assignment. Then read through the assigned text material. Prepare your answers to the questions, referring to the textbook as needed. Try to answer the questions in your own words. Number the questions as they are numbered in the assignment sheet. Then submit your homework for grading.

The term paper is worth 100 points. The term paper is designed to get you thinking more deeply about major environmental issues and to capture your views on how these might be addressed. A rubric that I use in grading the paper is included with the instructions for the paper.

Each of the exams is worth 100 points. Each exam contains 40 multiple-choice questions taken from the textbook chapters, and two short essay questions. Each multiple-choice question is worth 2 points. The essay questions are worth 10 points each.

GETTING STARTED:

For best success, set regular “appointments” with yourself to ensure uninterrupted time that you can devote to your studies.

It may be helpful to review pages 2-15 of the text for some hints for learning. Pages 8-12 are especially helpful if you have not taken a science course before. Pages 12-13 present the technique of concept mapping, which may be useful to you as you read and take notes on the text, or as you organize your thoughts in studying for exams.

You may submit your homework by email, mail or fax (using the fax number listed on the first page of the syllabus).

You may also choose to submit your homework to me by email. If you do this, please include the Chapter labels and the question numbers. At the top of the first page, include the information that would be included on the cover sheet (Name, Date, Homework Unit, ED Number or Center, Address, Phone).

COURSE OUTLINE:

The following outline shows the recommended sequence of Assignments and Exams.

PART A

1. Read the Learning to Learn section and Chapters 1-6.
2. Complete and submit the Unit 1 Homework Assignment
3. Use the time while you are waiting for your assignment to be graded to study the end-of-chapter Questions for Review, Key Terms, and Questions for Critical Thinking for these chapters. The text web site also contains helpful material for review, but it is not required.
4. Study the corrected Unit 1 assignment to identify areas where you may need to spend more time reading and studying.
5. Request and take Exam I (proctored)

PART B

1. Read Chapters 7-13.
2. Complete and submit the Unit 2 Homework Assignment.
3. Use the time while you are waiting for your assignment to be graded to study the end-of-chapter Questions for Review, Key Terms, and Questions for Critical Thinking for these chapters. The text web site also contains helpful material for review, but it is not required.
4. Study the corrected Unit 2 assignment to identify areas where you may need to spend more time reading and studying.
5. Request and take Exam II (proctored)

PART C

1. Unit 3 is a little different from the other units, because you will be writing your term paper in this unit.
2. Read Chapters 14-18.
3. The material in Chapters 14-18 may be helpful in writing your term paper, so read them now but the homework on these chapters will come later, in Part D of the course.
4. Carefully read the instructions for the Unit 3 Term Paper. Write and submit your Unit 3 Term Paper.
5. There is no Exam for Unit 3. Chapters 14-18 will be covered in Exam III.

PART D

1. Review Chapters 14-18.

2. Complete and submit the Unit 4 Homework Assignment.
3. Read Chapters 19-25.
4. Complete and submit the Unit 5 Homework Assignment.
5. Use the time while you are waiting for your assignments to be graded to study the end-of-chapter Questions for Review, Key Terms, and Questions for Critical Thinking for these chapters. The text web site also contains helpful material for review, but it is not required.
6. Study the corrected Unit 4 and Unit 5 assignments to identify areas where you may need to spend more time reading and studying.
7. Request and take Exam III (proctored)

COURSE GRADING;

Unit 1 Homework Assignment	100 pts
Exam I	100
Unit 2 Homework Assignment	100
Exam II	100
Unit 3 Term Paper	100
Unit 4 Homework Assignment	100
Unit 5 Homework Assignment	100
Exam III (Final)	<u>100</u>
TOTAL POINTS POSSIBLE	800

Final Grades

A	90-100%	720-800 points
B	80-89%	640-719
C	70-79%	560-639
D	60-69%	480-559
F	0-59%	0-479

NOTE: In order to pass this course, you must get a passing grade (“D” or better), on at least one of the exams and have enough cumulative points to earn a passing grade.

UPPER IOWA UNIVERSITY USES A STANDARD GRADING SYSTEM:

A = All work is excellent, shows exceptional understanding of materials; logical, clear, and insightful written and oral work, incorporates knowledge from other sources and moves easily to the next level of understanding, works well beyond minimum requirements.

B = Understanding material is good to very good, demonstrates good grasp of material, good oral and written skills, produces more than the minimum requirements, quality of all work is high.

C = Satisfactory understanding of the material, submits only the minimum requirements, communicates adequately in oral and written formats, displays an adequate understanding of all basic concepts.

D = Quality and quantity written and oral work is below average and barely acceptable.

F = Quality and quantity written and oral work is unacceptable.

CHEATING, ACADEMIC DISHONESTY AND PLAGIARISM:

Because cheating, academic dishonesty and plagiarism are affronts to the University community as a whole and a denial of the offender's own integrity, they will not be tolerated. Cheating includes but is not limited to:

- the use of unauthorized books, notes or other sources in the giving or securing of help in an examination or other course assignments,
- the copying of other students' work or allowing others to copy your work,
- the submission of work that is not your own or allowing others to submit your work as theirs,
- the submission of the same work for two or more classes without the approval of any instructors involved.

Academic dishonesty includes, but is not limited to:

- sharing academic materials knowing they will be used inappropriately,
- having access to another person's work without permission,
- providing false or incomplete information on an academic document,
- changing student records without approval.
- obtaining and using texts intended for instructor use only.

Plagiarism includes, but is not limited to:

- the presentation of another's published or unpublished work as one's own,
- taking words or ideas of another and either copying them or paraphrasing them without proper citation of the source,
- using charts, graphs, statistics or tables without proper citation.

Detected cheating, academic dishonesty, or plagiarism will result in consequences that may, at the instructor's discretion, include course failure. In addition, an offender may be reported to the Senior Vice President for the Extended University, the Dean of the Extended University, or designee for possible disciplinary action, which may include suspension or dismissal from the University. Upper Iowa University may make use of various plagiarism detection services. Individuals, by enrolling in courses offered by the University, consent to submission by the University of course-related assignments to such services and the retention of a copy of such assignments by the service.

Cheating, academic dishonesty and plagiarism infractions are tracked by the Dean of the Extended University, and cumulative evidence collected from multiple incidents will be considered when making suspension or dismissal decisions.

Extended University Catalog 2007/08 page 97.

http://www.uiu.edu/catalogs/eu/html/univ_policies.html#cheating

ATTENDANCE:

Even though a student does not attend a regular classroom in the traditional sense and keep up with a set schedule of assignments, it should be pointed out how important it is to keep yourself on a regular timely schedule if possible to complete and send in units. It is too easy to set work aside and decide to do it later. Suddenly, the need to complete assignments and get them in by

deadlines can become stressful and, at times, impossible. The key would be to set time aside on a regular basis and submit work in a timely manner.

LIBRARY RESOURCES:

As a student of Upper Iowa University, you have access to the resources of the Henderson-Wilder Library on the Fayette campus. If travel to the campus is not feasible, you can access the library through the University's website. Go to www.uiu.edu and click on the Library option located on the left side of the home page. If you would like to use InfoTrac, please contact the UIU Library staff at library@uiu.edu.

WITHDRAWAL:

If you wish to withdraw prior to the last day of the enrollment period you must contact the External Degree office by phone or in writing. After your original six month enrollment period you no longer have the option to withdraw from the course. You must finish the course or have a final grade assigned based on the coursework submitted.

SPECIAL NEEDS:

If you require accommodation for special needs, please provide documentation to: Director of External Degree.

This syllabus is tentative and subject to change.