

University of North Texas at Dallas
Spring 2016
SYLLABUS

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| Course Abbreviation/Number/Title/Semester Hrs | |
| BIOL1132-006: Environmental Science: 3 Hrs | |
| Department of Life and Health Sciences | Division of Liberal Arts and Life Sciences |
| Instructor Name: | Dr. Steve J. Gaciri |
| Office Location: | Room 305, Founder's Hall (Building 2) |
| Office Phone: | (972) 338-1525 |
| Email Address: | Steve.gaciri@unt.edu |
| Office Hours: | Tuesday/Thursday by appointment) |
| Virtual Office Hours: | N/A |
| Classroom Location: | Room 240, Founder's Hall (Building 2) |
| Class Meeting Days & Times: | Tuesday and Thursday 5:30 pm- 6:50 pm |
| Course Catalog Description: | Interdisciplinary approach to understanding basic concepts in environmental science including critical scientific thought, biodiversity, resource management, pollution, global climate change, resource consumption and population growth. Emphasis on how these concepts affect and are affected by human society. Includes laboratory. May not be counted toward a major or minor in biology. <i>Note: May be used to satisfy a portion of the Natural Sciences requirement of the University Core Curriculum.</i> |
| Prerequisites: | None |
| Co-requisites: | |
| Required Text: | Lecture text: Susan Karr, Jeneen Interlandi and Anne Houtman: Environmental Science for a Changing World. 2015 2 nd Edition W.H. Freeman and Company, New York. ISBN 13: 978-4641-6220-6, ISBN 10: 1-4641-6220-4 |
| Recommended Text and References: | |
| Access to Learning Resources: | UNT Dallas Library: phone: (972) 780-3625; web: http://www.unt.edu/unt-dallas/library.htm UNT Dallas Bookstore: phone: (972) 780-3652; e-mail: 1012mgr@fhcg.follett.com |
| Course Goals or Overview: | The goal of this course is to introduce students to environmental science and to give students the background information needed to critically think about current environmental issues. Topics will include basic ecology, a review of environmental policy, and resource management theories. The course will include discussions of current environmental and conservation challenges, many of which do not have a clear-cut solution. Students should be willing and able to voice and defend their opinions on these subjects as well as be respectful of the opinions of others. Students will be evaluated based on exam performance and research paper. |
| Learning Objectives/Outcomes: | At the end of this course, the student will |
| 1 | Demonstrate the ability to assimilate and critically think about biological and scientific processes/theories. |
| 2 | Demonstrate the ability to assimilate and critically think about environmental policy and legislation. |
| 3 | Explain the various roles of organisms in their environment, and discuss the interrelatedness of living organisms, environmental processes, and human cultural and societal needs. |
| 4 | Be able to accurately explain the conflicting social, economic, and biological needs of humanity and other living organisms. |
| 5 | Identify the major attributes and characteristics of the earth's major ecosystems and explain the role they play in economically important ecosystem services and biotourism. |
| 6 | List and discuss various personal and corporate actions that can mitigate or reverse the negative impact of human activities on the biosphere; explain various tradeoffs related to sustainable stewardship of the |

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| earth's biodiversity and its resources. |
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Course Outline

This schedule is subject to change by the instructor. Any changes to this schedule will be communicated by the instructor during class.

Lecture Schedule

| Week | Date | Topic |
|------|---------|---|
| 1 | Jan 18 | Introduction to the course Chapter 1: The Environmental Science and the Physical Earth |
| 2 | Jan 26 | Chapter 2: The Environmental Challenges We Face |
| | Jan 28 | Chapter 25: Environmental Sustainability and Human Values |
| 3 | Feb 2 | Chapter 2: Environmental Sustainability and Human Values Chapter 6,24: Environmental History, Politics, and Economics |
| | Feb4 | Chapter 5: Risk Analysis and Environmental Health Hazards Thesis Sentence due by 11:59pm on Blackboard (Attach a Word Document) |
| 4 | Feb 9 | Chapter 4: Human Population Change and the Environment |
| | Feb 11 | Chapter 4: Human Population Change and the Environment |
| 5 | Feb 16 | Movie: <i>Crude Impact</i> |
| | Feb 18 | <i>Review for EXAM I</i> Chapter 10: How Ecosystems Work |
| 6 | Feb 23 | Exam I (Chapters 1,2,,4,5,6,24,25,Movie: <i>Crude Impact</i>) |
| | Feb 25 | Chapter 11: How Ecosystems Work |
| 7 | Mar 1 | Chapter 11: Ecosystems and Evolution |
| | Mar 3 | Chapter 13: Biological Resources Annotated Bibliography due by 11:59pm on Blackboard (Attach Word Document) |
| 8 | Mar 8 | Chapter 20: Air and Air Pollution |
| | Mar 10 | Chapter 21: Global Atmospheric Changes |
| | | SPRING BREAK |
| 9 | Mar 22 | Movie: <i>An Inconvenient Truth</i> |
| | Mar 24 | Chapter 14,15: Freshwater Resources and Water Pollution |
| 10 | Mar 24 | Chapter 29,31: The Ocean and Fisheries |
| | Mar 29 | <i>Review for EXAM II</i> Chapter 27: Mineral and Soil Resources Research Paper Rough Draft due by 11:59 pm on Blackboard (through TurnItIn) |
| 11 | Mar 31 | Exam II (Chapters10,11,13,14,15,20,21,27,29,31Movie: <i>An Inconvenient Truth</i>) |
| | Apr 5 | Chapter 27: Mineral and Soil Resources Chapter 26: Land Resources |
| 12 | Apr 7 | Chapter 17,30: Agriculture and Food Resources |
| | Apr 12 | Chapter 7: Solid and Hazardous Waste |
| 13 | Apr 14 | Chapter 18,19: Nonrenewable Energy Resources Chapter 22: Renewable Energy Resources |
| | Apr 19 | Chapter 24: Renewable Energy Resources <i>Review for EXAM III</i> |
| 14 | Apr 21 | Exam III (Chapters 7,17,18,19,22,24,26,30,) |
| 15 | Apr 26 | <i>Review for Final Exam</i> Final Research Paper due by 11:59pm on Blackboard (through TurnItIn) |
| | Apr 28 | <i>Review for Final Exam</i> |
| 16 | Apr 30 | Comprehensive Final Exam: 8:00 AM - 10:00 AM |
| | May 2/8 | - NO CLASS - |

Course Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Class Participation/Attendance – Expect that every class will have class participation points associated with it (i.e. attend every class and be on time).

Research Paper (100 points) – This is a written assignment designed to supplement and reinforce course

material. The final research paper is worth 100 points. Prior to turning in the research paper, students will have to turn in a thesis sentence (10 points), an annotated bibliography (15 points), and a rough draft (25 points). This makes the entire research portion worth 150 points.

Exams (500 points) – These are written tests designed to measure knowledge of the presented course material. The material covered in the exam will come from the textbook, lectures (including current environmental events), and class discussions. Students will have three in-class examinations and a comprehensive in-class final exam. Exams 1, 2, and 3 are worth 100 points each. The final exam is comprehensive and worth 200 points. Exams may consist of a combination of multiple choice, matching, fill-in-the-blank, short answer, and various essay items. Any student found cheating will receive a zero (0) for that exam and may face other disciplinary action(s).

Note: 882-E scantrons and pencils are required (NOT PROVIDED) for every exam.

Laboratory (250 points) – You will perform experiments designed to give you hands-on real-world applications of the lecture material. In some cases, you will watch documentaries to complement the experiments. You will have 2 lab exams worth 40 points each. After each laboratory exercise, you will have an assignment worth 10- 20points, for a total of 170 points. **Each assignment is due at the beginning of the next lab session.** You do not receive a separate grade for lab, so the points received for the laboratory(out of 250) will be added into the lecture grade calculation. **Note: The lab is worth 25% of your final overall grade for the course. However, you must receive a passing grade (60% or higher) in the laboratory to receive a passing grade in the class. Students must pass both the lecture and the lab independently to pass the course (i.e. if you fail the lab, you automatically fail the entire course and if you fail the lecture, you automatically fail the course).**

Grading Matrix:

| Instrument | Value (points) | Total |
|-------------------------|--|------------|
| Research Paper | thesis sentence (10 points), annotated bibliography (15 points), rough draft (25 points) final research paper (50 points) | 100 |
| Midterm Exams | 3 exams worth 100 points each | 300 |
| Final Exam | Comprehensive exam | 100 |
| Lab assignments/Reports | 10 points each= 120 | 100 |
| Total: | | 600 |

Grade Determination:

- A = 90% or better
- B = 80 – 89 %
- C =70 – 79 %
- D =60 – 69 %
- F = less than 60%

Texas Core Curriculum

Student Learning Objectives and Outcome Assessments

Objectives 1a, 2a, 2b and 2d: Students will write an argument style paper on an environmental issue that incorporates biological, social, and economic arguments. This will introduce them to the tools required for research in many disciplines, and facilitate successful research in the future. Students will be graded on content, spelling and grammar, references (one of which must be from the internet), the strength of the argument, and the extent to which they have thought critically about the feasibility of treatment and degree of exploration. The student will then present the information they have collected to the class using a variety of media including Power Point, Prezi, posters, or any combination of these.

Objective 2c: During the unit exploring energy sources, students are presented an essay question in which they discuss the use of fossil fuels for energy from an environmental and non-environmental viewpoint. Students must construct a solution that adequately resolves the conflict. Students will be graded on the correctness of the discussion and the feasibility of the proposed resolution.

Objectives 3a and 3b: Students will participate in a discussion of alternative energy sources and their environmental sustainability. Students will be graded on their participation.

Assessment Rubrics

Objectives 1a, 2a, 2b and 2d:

Topic choice and applicability to environmental science (10 points) _____

Is the paper topic appropriate for the class?

Content (100 points) _____

Has the student provided adequate background information and summarized it correctly?

Has an original idea, supported by evidence, been proposed by the student?

Has the student made an effective closing argument or statement?

Have appropriate conclusions been drawn from background information?

Formatting, grammar, spelling, and style (15 points) _____

Is the paper formatted correctly based on the requirements outlined?

Are there spelling and grammatical errors? If so, with what frequency and intensity do they appear?

Literature Cited (25 points) _____

Does the number of citations meet the requirements outlined (a minimum of 5, with at least 2 peer-reviewed sources and 1 reputable website)?

Are the citations appropriate for the topic being written about?

Are the citations formatted properly in both the text and the literature cited section?

Objectives 3a and 3b:

| Score | Description |
|--------------------------|---|
| 4 – Exceeds expectations | The student contributed to the discussion by offering his/her opinion, or by clarifying a topic of conversation. The information shared by the student will demonstrate that he/she has assimilated course curriculum and curriculum obtained from extra readings, or research, or both |
| 3 – Acceptable | The student contributed to the discussion by offering his/her opinion, or by clarifying a topic of conversation. The information shared by the student will demonstrate that he/she has assimilated course curriculum |
| 2 – Below expectations | The student contributed to the discussion, but the comments made by the student demonstrated a lack of understanding of course curriculum |
| 1 – Unacceptable | student did not contribute to the discussion |

University Policies and Procedures

Students with Disabilities (ADA Compliance):

The University of North Texas Dallas faculty is committed to complying with the Americans with Disabilities Act (ADA). Any student requesting academic accommodations based on a disability is required to register with Disability Services each semester. A letter of verification for approved accommodations can be obtained from this office. Please be sure the letter is delivered to me as early in the semester as possible. Disability Services is located in the Student Life Office in DAL2, Suite 200 and is open 8:30 a.m. – 5:00 pm, Monday through Friday. The phone number is (972) 338-1775.

Student Evaluation of Teaching Effectiveness Policy:

The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized classes at UNT. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider the SETE to be an important part of your participation in this class.

Assignment Policy:

Collaborative efforts on completing the assignments are encouraged so long as all member of the collaboration contribute equally. As with all other graded assessments, cheating will not be tolerated. While collaborations are encouraged, each student must submit their own work, which cannot be identical to the work submitted by the other members of the collaboration. Assignments should be turned in on time. Assignments should be turned in on time. Late assignments will be graded, but with a penalty of 10% each day it is late.

Exam Policy:

Exams should be taken as scheduled. No makeup examinations will be allowed except for documented emergencies (See Student Handbook). Students are allowed to take make-up one missed exam, with proper documentation. The instructor must be contacted within 24 hours of the exam to schedule a make-up. A makeup exam must be taken within one week of the original exam. If a student knows in advance that they will miss an exam, they must take the exam prior to the exam date. There is no make-up for the second or subsequent missed exams. Students should arrive on time to take the exam. On exam day, once the first exam is turned in, no more exams will be distributed to students that arrive late to the exam period. Any student caught cheating will automatically receive a 0 on the exam, and the instructor may pursue further disciplinary action.

Academic Integrity:

Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Academic Integrity at <http://www.unt.edu/unt-dallas/policies/Chapter%2007%20Student%20Affairs,%20Education,%20and%20Funding/7.002%20Code%20of%20Academic%20Integrity.pdf> for complete provisions of this code.

In addition, all academic work submitted for this class, including exams, papers, and written assignments should include the following statement:

On my honor, I have not given, nor received, nor witnessed any unauthorized assistance that violates the UNTD Academic Integrity Policy.

Bad Weather Policy:

On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campuses main voicemail number (972) 780-3600 or search postings on the campus website www.unt.edu/dallas. Students are encouraged to update their Eagle Alert contact information, so they will receive this information automatically.

Attendance and Participation Policy:

The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Attendance and participation in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. Students are responsible to notify the instructor if they are missing class and for what reason. Students are also responsible to make up any work covered in class. It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes, if they are absent.

Diversity/Tolerance Policy:

Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive and inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Office of Student Life as the instructor deems appropriate.

Use of Electronic Gadgets in the Classroom:

You are allowed to take notes using laptops/iPads/other electronic devices. You are allowed to record the lectures. The instructor reserves the right to ask you to discontinue use of an electronic device, if it becomes disruptive to others in the classroom.

Food/Drink Policy

No food or drinks are allowed in the classroom or the laboratory, except for water.