

University of North Texas at Dallas

FALL 2015 SYLLABUS

BIOL1132D-001 : Environmental Science 3Hrs			
Department of	Life & Health Sciences	School of	Liberal Arts & Sciences
Instructor Name:	Dr. Aubrey Frantz		
Office Location:	Room 251, Building 2		
Office Phone:	972-338-1523		
Email Address:	aubrey.frantz@untdallas.edu		
Office Hours:	M 1:00 – 2:30 pm TR 1:00- 2:30 pm W 10:30 – 11:30 am (If you need another time or want to schedule an appointment, please contact me by email)		
Classroom Location:	DAL1 102		
Class Meeting Days & Times:	Lecture: Monday & Wednesday 11:30-12:50 Laboratory: Friday 10:00 – 11:50am section 301 Friday 1:00 – 2:50pm section 305		
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 towards a major or minor in biology. <i>May be used to satisfy a portion of the Natural Sciences requirement of the University Core Curriculum.</i>		
Prerequisites:	None		
Co-requisites:	BIOL1132D Laboratory		
Required Text:	Karr, S., J. Interlandi, and A. Houtman. 2015. Environmental Science for a Changing World. Second Edition. Macmillan Education. ISBN10: 1464162204; ISBN13: 9781464162206 LaunchPad Access is required		
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;		
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. Students will be willing and able to voice and defend their opinions on these subjects as well as be respectful of the opinions of others.		
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 and theories		
2	Demonstrate the ability to assimilate and critically think about environmental issues, environmental policy and legislation		

3	Define the role of organisms in their environment and discuss the interrelatedness of organisms, environmental processes, and human cultural and societal needs
4	Be able to explain the conflicting biological, social, economic and 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 critical ecosystem services
6	List and discuss various individual and organizational actions that can mitigate or reverse the negative impact of human activities on the biosphere as well as the various tradeoffs related to global sustainability

Course Outline

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

TOPICS	Assignment Due	Date
Course Introduction		8/24
Environmental Literacy and Goals of Sustainability (Chapter 1)		
Environmental Literacy and Goals of Sustainability (Chapter 1) Science Literacy & the Process of Science (selections from Chapter 2 and 6)		8/26
Human Populations (Chapter 4)		8/31
Toxicology and Risk Assessment (Chapter 3)	Learning Curves Chapters 1, 4 <i>(Learning Curves 2 and 6 for extra credit)</i>	9/2
LABOR DAY – No Class		9/7
Environmental Health (Chapter 5)	Learning Curves Chapters 3, 5	9/9
Video: <i>The Estrogen Effect</i> and Review		9/14
Exam I (Chapters 1-5)		9/16
Library Instruction/ Writing Center – Research Literacy		9/21
Managing Solid Waste (Chapter 7)		9/23
Ecosystems and Nutrient Cycling (Chapter 8)	Learning Curves Chapter 7	9/28
Ecosystems and Nutrient Cycling (Chapter 8)	Thesis Statement for Research Paper due on Blackboard	9/30
Population Ecology (Chapter 9)	Learning Curve Chapter 8	10/5
Community Ecology (Chapter 10)		10/7
Ecosystem Activity and Review	Learning Curves Chapters 9, 10	10/12
Exam II (Chapters 7-10)		10/14
Evolution and Extinction (Chapters 11)		10/19
Biodiversity (Chapters 12)	Learning Curves Chapters 11,12	10/21
Preserving Biodiversity (Chapter 13)	Annotated Bibliography for Research Paper due on Blackboard	10/26
Feeding the World (Chapter 16 and selections from Chapter 17)	Learning Curves Chapters 13	10/28
Freshwater Resources and Water Pollution (Chapters 14 & 15)		11/2
Freshwater Resources and Water Pollution (Chapters 14 & 15)		11/4
Video: <i>An Inconvenient Truth</i> and Review	Learning Curves Chapter 14-16 <i>(Learning Curve 17 for extra credit)</i>	11/9
Exam III (Chapters 11-16)	Research Paper due on Blackboard	11/11
Air and Air Pollution (Chapter 20)		11/16

Climate Change (Chapter 21)		11/18
Fossil Fuels: Coal (Chapter 18)	Learning Curves Chapters 18-21	11/23
Fossil Fuels: Oil and Natural Gas (Chapter 19)		
Nuclear Power (Chapter 22)		11/25
Alternatives to Fossil Fuels – Renewable Energy (Chapter 23)	Learning Curves Chapters 22,23	11/30
Energy Discussion Question Video: <i>Kilowatt Ours</i> and Review		12/2
Final Exam IV (Chapters 15-18)		12/7

Course Evaluation Methods

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

Grade determination: Separate letter grades will not be assigned for the lab. While laboratory accounts for only 30% of your grade, you must receive a passing grade (60% or higher) in the laboratory to receive a passing grade in the class.

Exams –You will be given four in-class examinations. Each exam is worth 100 points. The exams will consist of a combination of multiple choice questions. **Attendance is required for all exams.** No make-up exams for unexcused absences. Any student found cheating on an exam will receive a zero for the exam and may face other disciplinary action. **Note: 882-E scantrons and pencils are required for every exam.**

LaunchPad LearningCurves – On the **LaunchPad platform** each chapter of your book has a series of questions (quiz) that will test your reading comprehension. There is no grade for this assignment, simply by completing the questionnaire you will get the corresponding 5 points per chapter. By completing all 20 assigned Learning Curves on time, you will receive 100 points. Late submissions will not be graded.

To register for the LaunchPad component of the course go to:

<http://www.macmillanhighered.com/launchpad/saes2e/1867474> PLEASE bookmark the page to make it easy to return to.

Research Paper – You will be required to write a 5 page research paper on an environmental issue that our society is currently facing. This research paper should address the biological, social, and economic arguments of the environmental issue that you choose. **A thesis statement for the research paper (10 pts), as well as an annotated bibliography (20 pts) must be submitted and approved by the respective due dates.** Additional instructions, guidelines and rubrics for the research paper will be discussed in class and posted on Blackboard.

Presentation – You will give a presentation on an environmental issue that our society is currently facing. Your presentation, which will be made in class (laboratory section), should be approximately 10 minutes, include a description of the issue, the causes of the issue, potential resolutions, as well as properly referenced and relevant primary data from peer-reviewed scientific research articles. Additional instructions, guidelines and rubrics for the presentation will be discussed in class and posted on Blackboard.

Laboratory- 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. After each laboratory exercise, you will have an associated lab report or lab assignment worth 10-20 points. Each assignment is due at the beginning of the next lab session. In addition, you will have two laboratory exams. A separate laboratory schedule and syllabus will be provided and discussed by the laboratory instructor. Attendance in laboratory is mandatory.

Energy Resource Discussion – We will have a class discussion on an environmental science issue that will be communicated by the instructor in advance. Students should come prepared to discuss the topic knowledgeably and effectively. Student participation in the discussion will be graded and will be incorporated into the total grade as bonus points.

Grading Matrix:

Instrument	Value (points)
Exam 1	100
Exam 2	100
Exam 3	100
Exam 4	100
Research Paper	100
LaunchPad Learning Curves	100
Laboratory	250
Total:	850

Grade Determination:

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

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). Students' with documented disabilities are responsible for informing faculty of their needs for reasonable accommodations and providing written authorized documentation. Grades assigned before an accommodation is provided will not be changed as accommodations are not retroactive.

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: *Assignments should be turned in on time. Late Learning Curve submissions will not be graded. Late thesis statements, annotated bibliographies, and research papers will be graded, but with a penalty of 10% each day it is late. Assignment policies for laboratory can be found on the lab syllabus. **Exam Policy:** Exams should be taken as scheduled. No makeup examinations will be allowed except for documented emergencies (See Student Handbook) **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_Integrity.pdf for complete provisions of this code.*

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 & 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.