

# University of North Texas at Dallas

## Spring 2015 SYLLABUS

| <b>Course Abbreviation/Number/Title/Semester Hrs</b>  |   |
|---|---|
| BIOL1132D.030: Environmental Science: 3 Hrs.<br>BIOL1132D.330: Environmental Science Laboratory |   |
| <b>Department of Life and Health Sciences</b>   | <b>Division of Liberal Arts and Life Sciences</b>   |
| <b>Instructor Name:</b>   | Dr. Lynda Folts   |
| <b>Office Location:</b>   | Room 302, Founder's Hall (Building 2)   |
| <b>Office Phone:</b>  | (972) 322-4265  |
| <b>Email Address:</b>   | lynda.folts@untDallas.edu   |
| <b>Office Hours:</b>  | Virtual: Monday: 7:00 – 8:00 am<br>Virtual: Wednesday: 7:00 - 8:00 am<br>(or by appointment, contact the instructor)  |
| <b>Virtual Office Hours:</b>  | Appointments available when needed./contact instructor directly.  |
| <b>Classroom Location:</b>  | 100% Online   |
| <b>Class Meeting Days &amp; Times:</b>  | 100% Online   |
| <b>Course Catalog Description:</b>  | Interdisciplinary approach to understanding basic concepts in environmental science and community laboratory 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.<br><i>Note: May be used to satisfy a portion of the Natural Sciences requirement of the University Core Curriculum.</i>   |
| <b>Prerequisites:</b>   | None  |
| <b>Co-requisites:</b>   | Biol 1132D.330 Online Laboratory  |
| <b>Required Text:</b>   | Textbook: Hassenzahl, DM, Hager MC, Berg, LR. 2012.<br><i>Visualizing Environmental Science.</i> 4th Edition. Wiley Publishing Co. United States of America. ISBN: 978-1-11-8169834   |
| <b>Required Lab Text :</b>  | online  |
| <b>Access to Learning Resources:</b>  | UNT Dallas Library:<br>phone: (972) 780-3625;<br>web: <a href="http://www.unt.edu/unt-dallas/library.htm">http://www.unt.edu/unt-dallas/library.htm</a><br>UNT Dallas Bookstore:<br>phone: (972) 780-3652;<br>e-mail: <a href="mailto:1012mgr@fhq.follett.com">1012mgr@fhq.follett.com</a>  |
| <b>Course Goals or Overview:</b>  |   |
|   | 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, lab reports, assignments, and oral presentation. |
| <b>Learning Objectives/Outcomes:</b> 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/<br>Date            | Topic   | Assignments                              | Points<br>Due Dates |
|--------------------------|---|--|---------------------|
| 1<br>Jan. 20             | Chapter 1 & 2 Environmental challenges & Sustainability   | Discussion Board<br>Assignment questions | 5 1/26<br>5 1/26    |
| 2<br>Jan. 26             | Chapter 3 Environmental History, Politics, and Economics<br><b>Quiz 1- Ch.1-3 Due 1/30</b>  | Discussion Board<br>Assignment questions | 5 2/1<br>5 2/1      |
| 3<br>Feb. 2              | Chapter 4 Risk Analysis, Environmental Hazards<br><b>Quiz 2- Ch. 4 Due 2/6</b>  | Discussion Board<br>Assignment questions | 5 2/8<br>5 2/8      |
| 4<br>Feb. 9              | Chapter 5 How Ecosystems Work<br><b>Exam 1 Posted on Blackboard Course Page-Due 02-12-15</b><br><b>Research Paper Outline Due 02-10-15</b>                      | Discussion Board<br>Assignment questions | 5 2/15<br>5 2/15    |
| 5<br>Feb.16              | Chapter 6 Ecosystems and Evolution<br><b>Quiz 3-Ch. 5-6 Due 2/20</b>  | Discussion Board<br>Assignment questions | 5 2/22<br>5 2/22    |
| 6<br>Feb. 23             | Chapter 7 Human Population Change and Environment<br><b>Quiz 4- Ch. 7 Due 2/27</b>  | Discussion Board<br>Assignment questions | 5 3/1<br>5 3/1      |
| 7<br>Mar.2               | Chapters 8 & 9 Air and Air Pollution<br>Global Atmospheric Changes <b>Quiz 5 Ch.8&amp;9 Due 3/06</b>  | Discussion Board<br>Assignment questions | 5 3/8<br>5 3/8      |
| 8<br>Mar. 9              | Chapter 10 Freshwater Resources and Water Pollution<br><b>Exam 2 Posted on Blackboard Course Page-Due 03-12-15</b>  | Discussion Board<br>Assignment questions | 5 3/15<br>5 3/15    |
| SPRING BREAK MARCH 16-22 |   |  |                     |
| 9<br>Mar. 23             | Chapter 11 The Ocean and Fisheries<br><b>Research Paper Draft Due 03-29-15</b>  | Discussion Board<br>Assignment questions | 5 3/29<br>5 3/29    |
| 10<br>Mar. 30            | Chapter 12 Mineral and Soil Resources<br><b>Quiz 6 Ch. 10-12 Due 04-03-15</b>   | Discussion Board<br>Assignment questions | 5 4/5<br>5 4/5      |
| 11<br>April 6            | Chapter 13 Land Resources<br><b>Quiz 7 Ch. 13 Due 04-10-15</b>  | Discussion Board<br>Assignment questions | 5 4/12<br>5 4/12    |
| 12<br>April 13           | Chapter 14 Agriculture and Food Resources<br><b>Quiz 8 Ch. 14 Due 04-17-15</b>  | Discussion Board<br>Assignment questions | 5 4/19<br>5 4/19    |
| 13<br>April 20           | Chapter 15 Biodiversity and Conservation<br><b>Exam 3 Posted on Blackboard Course Page- Due 04-24-15</b><br><b>Peer Reviews of Research Paper Due- 04-27-15</b> | Discussion Board<br>Assignment questions | 5 4/26<br>5 4/26    |
| 14<br>April 27           | Chapter 16 Solid and Hazardous Waste<br><b>Quiz 9 Ch. 15&amp;16 Due 05-01-15</b>  | Discussion Board<br>Assignment questions | 5 5/3<br>5 5/3      |
| 15<br>May 4              | Chapter 17 & 18 Renewable and Non- Renewable Resources<br><b>Quiz 10 Ch. 17 &amp; 18 Due 05-08-15</b>   | Discussion Board<br>Assignment questions | 5 5/10<br>5 5/10    |
| 16<br>May 11             | <b>Final Exam Posted Online Due- 5-11-15 midnight</b><br><b>Final Research Paper Due 5-10-15 midnight</b>   |  |                     |

## Laboratory Schedule

| Week | Date    | Topic   | Points |
|------|---------|---|--------|
| 1    | Jan. 26 | No Lab Due  | N/A    |
| 2    | Feb.1   | Lab 1. Environmental Ethics and the Scientific Method<br><b>Lab Assignment 1: Worksheet on <i>Cancer Cure or Conservation</i></b> | 10     |
| 3    | Feb. 8  | Movie: <i>Gasland</i><br><b>Lab Assignment 2: Worksheet on the Movie <i>Gasland</i></b>   | 10     |

|                          |           |  |                 |
|--------------------------|-----------|--|-----------------|
| 4                        | Feb. 15   | Lab 10. Human Population and Environmental Impact<br><b>Lab Report 1: Human Population and Ecological Footprint</b>  | 20              |
| 5                        | Feb. 22   | Lab 2. The Carbon Cycle<br><b>Lab Report 2: Photosynthesis</b>   | 20              |
| 6                        | March 1   | No Lab Due   | n/a             |
| 7                        | March 8   | Lab 3. The Flow of Energy through Ecosystems<br><b>Lab Report 3: Flow of Energy through Food Webs</b><br><b>Lab exam 1 – ONLINE –</b>  | 20              |
| 8                        | March 15  | Lab 5. Preserving Local Ecosystems – Movie: <i>Vanishing of the Bees</i><br><b>Lab Assignment 3: Worksheet on the Movie: Vanishing of the Bees</b><br><b>Lab exam 1 – DUE Mar. 15, 2015 –</b>  | 10<br><b>40</b> |
| March 16-22 SPRING BREAK |           |  |                 |
| 10                       | March. 29 | Lab 6. Water and Water Pollution<br><b>Lab Report 4: Water Quality Analysis</b>  | 20              |
| 11                       | April 5   | Lab 11. Resource Consumption<br><b>Lab Report 5: Marine Fisheries</b>  | 20              |
| 12                       | April 12  | Videos: Plastic bags and bottled water <a href="http://www.plasticfreetimes.com">www.plasticfreetimes.com</a><br><b>Lab Assignment 4: Essay on plastic bags and bottled water.</b><br><a href="http://back2tap.com">back2tap.com</a> | 10              |
| 13                       | April 19  | Lab 4. Land Use and Resource Management<br><b>Lab Report 6: Soil Analysis</b>  | 20              |
| 14                       | April 26  | No Lab Due   |                 |
| 15                       | May 3     | Lab 12. Applying Environmental Science<br><b>Lab Assignment 5: Worksheet Energy alternatives</b>   | 10              |
| 16                       | May 10    | <b>Lab exam 2 – ONLINE Due Dec. 8, 2014</b>  | <b>40</b>       |
|                          |           |  |                 |

## Course Evaluation Methods

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

**Course Work (550 points)**- 1 Weekly discussion Board, 5 Weekly Assignment Questions, Course work posted on the Blackboard page and due weekly.

**Laboratory (250 points)** – You will perform virtual experiments designed to give you real-world applications of the lecture material. In some cases, you will watch documentaries to complement the experiments, other times we will work outside on a campus project. You will have 2 lab exams worth 40 points each. After each laboratory exercise, you will have an assignment worth 10 - 20 points, 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 26% of your final overall grade for the course. However, 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).**

### BIOL 1132 Research Paper Guidelines and Dates

**Term paper** Write a review paper on one of the current research topics related to Environmental Science. Topic selection and outline paper are due by February 10, and the paper is due by May 10. Both outline paper and term paper need to be prepared in MS word (.doc or .docx) and uploaded to the corresponding link provided. Misplaced assignments will not be graded.

□ *Contents of the paper:* Discuss a focused “hot topic”, with sufficient discussion of background information to allow anyone taking the class to understand the significance. Research approaches and future directions should also be briefly discussed. The length of the paper is **minimum 8 pages of double spaced text (font size no bigger than 12)**. You can provide figures. Write with your classmates as the targeted readers. You should not “reuse” a topic used from other courses.

□ *Sources and their use:* In recent years there has been a tendency to rely more heavily on web pages as sources. Students are warned that plagiarizing any source is a serious violation of academic standards—credit and use your sources properly. A definition of plagiarism can be found in the section of University Statement. **\*\*Note:** I allow the use of some figures downloaded from the web, but you should cite the

reference or give the website. Figure legends should be your own with succinct and clear information.

□ *Style*: Papers will be judged on their organization and the clarity of writing. Papers that have numerous misspellings or grammatical errors will be rated poorly and this rating will seriously impact the grade. Proofread carefully. Use spelling checkers. Have others read the paper both for clarity and content. The paper should follow **APA 6<sup>th</sup> Edition writing style 12 point font- citation systems of Name-Year.**

**Categories of term paper topics you can choose from;**

**Population Growth and Resources**

**Global Warming**

**Water Supply**

**Air Pollution**

**Green Building**

**Invasive Species**

**Urban Expansion**

**Global Food Crisis**

**Hydraulic Fracturing**

**Plastics in the Ocean**

**Natural Cures using Plants**

**Or any other environmental topic you desire. Check with the instructor if you are not certain of your topic choice.**

Student may further develop and use a specific sub-topic from each category.

You have to provide **1- page outline** of your term paper outline along with minimum 3 references (full-text scientific research papers in PDF format) covering your term paper topic **(Due: February 10th).**

**Peer-review** You will upload your working draft of term paper by March 29 and start to receive comments and suggestions from your class mates. You will incorporate those suggestions and recommendations in your finalized term paper. You will review the papers of at least 3 class mates using Microsoft Word Review Tools. You will complete the review then upload it to the Group link provided using the following format: **last name\_ Review\_ Authors last name\_ date** This process allows the student to improve the paper with suggestions from peers before the final submission. **To receive full credit:**

**i) you have to upload your draft by March 29th,**

**ii) read and provide feedback on minimum 3 drafts of your classmates (due by April 27)**

**iii) submit your Final paper by May 10 midnight to the link provided.**

**Grading Matrix:**

| <b>Instrument</b>           | <b>Value (points)</b>                | <b>Total</b> |
|-----------------------------|--------------------------------------|--------------|
| <b>Lecture</b>              |                                      |              |
| 1 Discussion Board          | 5 points weekly 15 weeks             | 75           |
| 5 Assignment questions      | 1 point weekly 15 weeks              | 15           |
| 10 Blackboard Quizzes       | 11 points each                       | 110          |
| Research Paper/ Peer Review | 20 outline, 20 peer review, 60 paper | 100          |
| Exams                       | 3 exams worth 100 points each        | 300          |
| Final Exam                  | Comprehensive exam                   | 100          |
| <b>Lab</b>                  |                                      |              |
| Lab assignments             | 10 – 20 points each                  | 170          |
| Lab exams                   | 2 lab exams worth 40 points each     | 80           |
| <b>Total:</b>               |                                      | <b>950</b>   |

**Grade Determination:**

**855-950 A**

**760-854 B**

**665-759 C**

**570-664 D**

**569 or < F**

Separate letter grades will not be assigned for the lab. The lab is worth 26% of the total course grade (250 points). This is a large component of your course grade and should be an opportunity to improve your grade, rather than harm it.

## **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:**

*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\\_Integrity.pdf](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.*

*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.**

### **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.*