Environmental Science I
ENVR 1401/GEOL 1405
Spring 2020, 8-Week Term I
Professor: Paul Patrick Day

Course Syllabus

Instructor Contact Information:
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Eastfield College
3737 Motley Drive
Mesquite, TX 75150

Course Reference No.: 1256890 (GEOL 1405)/1256898 (ENVR 1401)

Time and Location:
Lectures: 1:00pm - 3:50pm (MW), C261
Lab: 1:00pm - 3:50pm (TTh), C321
Office Hours: Posted on wall outside C267

Course Description:
Interdisciplinary study of both natural (biology, chemistry, geology) and social (economics, politics, ethics) sciences as they apply to the environment. Focus on current global concerns, including, global warming, overpopulation, deforestation, pollution, biodiversity and resource use. Practical laboratory experience emphasizes the application of fundamental principles of biology, chemistry and geology as well as critical thinking and analysis. (3 units LEC, 3 Lab) Grade Only.

Course Learning Outcomes:
1. Recognize, describe, and quantitatively evaluate earth systems, including the land, water, sea, and atmosphere, and how these function as interconnected ecological systems.
2. Assess environmental challenges facing humans caused by their interaction with the physical and biological environment (e.g., population growth, energy resources, food production, pollution, water and resource use).
3. Acquire a scientific vocabulary and critical thinking skills related to environmental science.
5. Apply the scientific method to environmental investigation.
6. Measure and observe aspects of the environment (e.g., air, water, soil) through sampling and sample analysis.
7. Develop an assessment plan for an environmental case study.
8. Demonstrate the collection, analysis, and reporting of data.

Pre-requisite/Co-requisite: College-level ready in Reading.

Required Course Text and Materials:

A New York Times monthly online subscription (required for homework assignments). You are free to cancel the subscription once the course has ended.

Field Equipment (acquire right away…don’t wait): Mapping/charting board and white lab coat.

Course Requirements:
1. Read assigned chapters prior to lectures.
2. Contribute to class discussions (where applicable).
3. Successfully complete all graded assignments (listed below).
4. The instructor reserves the right to make reasonable changes to this syllabus, course schedule, or grading requirements during the course. Students will be notified of changes in writing and/or by announcement in class.

**Grading Policy:**

The student's grade will be based on the cumulative collection of points received on the lecture exams and homework sets assigned throughout the semester. Assignments will be reviewed after they are given/collected in class, and I will do my best to return graded materials within two weeks. At any time in the semester a student can determine their standing in the class by dividing their current total cumulative score by the current total points available. For example, if a student scored 83 points on the first unit exam, that student's standing in the class would be a B. If a student scored 83 points on the first exam and 79 and 89 points on the second exam and final exam, then their standing in the class would be 

\[
\frac{83+79+89}{300} = 84\% = \text{B}.
\]

A curve may be employed when issuing final grades.

**Grading:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
<th>Lecture Section</th>
<th>Lab Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100-89.5%</td>
<td>Midterm 100 points</td>
<td>Lab Assignments 150 points</td>
</tr>
<tr>
<td>B</td>
<td>89.5-79.5%</td>
<td>Final Exam 100 points</td>
<td>Lab Final 50 points</td>
</tr>
<tr>
<td>C</td>
<td>79.5-69.5%</td>
<td>Homework Sets 100 points</td>
<td>Total Points 300 points</td>
</tr>
<tr>
<td>D</td>
<td>69.5-59.5%</td>
<td>Total Points 300 points</td>
<td>Total Points 200 points</td>
</tr>
<tr>
<td>F</td>
<td>59.5% and below</td>
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**Lecture Exam Policy:**

There will be two exams covering all material up to the previous exam. Exams are not cumulative though some of the material may be based on earlier chapters. Each exam will require a scantron to be provided by the student or will be administered online. The final exam will not be cumulative. It should be noted that questions will be taken from the reading and lectures and will concentrate on vocabulary words, lectures, homework problems, and readings assigned in class. To do well on an exam you should attend class regularly, complete the reading assignments before class, and know the material and vocabulary beforehand. **There will be no make-up exams permitted except in the event of a documented emergency or unless cleared in advance by the instructor.**

The exams will focus on the bold-type vocabulary words from the text book, information from the required reading (even if not covered in detail in lecture), problems similar to ones you’ve done in homework assignments, and general lectures. Techniques that will aid in preparation for this course will be to take good class notes, use flash cards to learn vocabulary words, and to remain current on the reading and homework.

**Homework:**

Environmental Science is a course that requires quite a bit of practice to master. While the homework assignments won’t require any advanced math skills, most of the problem sets require some logic and perhaps a little pre-algebra to work through. You will also need to have GoogleEarth installed on your computer (freely available at https://www.google.com/earth/) and reliable access to the internet.

To do these problem sets, we will be using the MasteringEnvironmentalScience website provided by Pearson publishing. That website is located at: [www.masteringenvironmentalscience.com](http://www.masteringenvironmentalscience.com). You are required to register as soon as possible on their website in order to get these assignments completed. In order to register you will need the following three things:

1. Valid Email address
2. Course ID (For this lecture class it is MESDAY7295502)
3. Access code (included with book purchase or can be bought on the website)

If you need help or have any trouble registering, contact Pearson directly. Also, if you’d like a tutorial on how to register, one can be found on their youtube channel at the following link: [https://youtu.be/BCWgNu-kxi0](https://youtu.be/BCWgNu-kxi0)
Chapter homework sets are due right around the time of the midterm and final exams. Late submittals are not accepted, so DO NOT WAIT TILL THE LAST MINUTE. Allow yourself 2-5 hours per assignment to do a thorough job. If you have any problems, please see me during office hours or send me an email.

Lab Assignments:
The student's lab grade will be based on the cumulative collection of points received on a series of lab experiments, field trips and a lab final administered during the term. Assignments will be reviewed after they are given/collected in class, and I will do my best to return graded materials within two weeks. It should be noted that lab exam questions will be taken from the laboratory assignments given in class. To do well on the Lab Final you should attend class regularly, complete the assignments in class, and know how to do them well before the exam. No make-ups will be available.

Extra Credit Policy:
Extra Credit will not be offered to any one individual as a means of “catching-up” on incomplete work. If offered, it will be designed to help students cushion their grade or provide a slight lift rather than be a primary determiner of course success.

Institutional Policies and Services:
Institutional policies relating to this course can be accessed from the following link:

Class/Lab Schedule

<table>
<thead>
<tr>
<th>Week#</th>
<th>Class Dates (Week of)</th>
<th>Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1/19 - 1/25</td>
<td>Topics: Science and Sustainability; Physical Earth Systems Reading: Chapters 1 and 2 Labs 1 and 2</td>
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<tr>
<td>2</td>
<td>1/26 - 2/1</td>
<td>Topics: Evolution, Populations, and Biodiversity Reading: Chapter 3 Labs 3 and 4</td>
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<tr>
<td>3</td>
<td>2/2 - 2/8</td>
<td>Topics: Community Ecology Reading: Chapter 4 Labs 5 and 6</td>
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<td>4</td>
<td>2/9 - 2/15</td>
<td>Topics: Ecosystem Ecology Reading: Chapter 5 Labs 7 and 8</td>
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<tr>
<td>5</td>
<td>2/16 - 2/22</td>
<td>Topics: Human Population Reading: Chapters 8 <strong>Midterm and Homework for Chapters 1-5 are Due</strong> Labs 9 and 10</td>
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<tr>
<td>6</td>
<td>2/23 - 2/29</td>
<td>Topics: Soil and Agriculture Reading: Chapters 9 Labs 11 and 12</td>
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<tr>
<td>7</td>
<td>3/1 - 3/7</td>
<td>Topics: Agriculture and Biotechnology Reading: Chapters 10 Labs 13 and 14</td>
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<tr>
<td>8</td>
<td>3/8 - 3/14</td>
<td>Topics: Biodiversity and Conservation Biology Reading: Chapters 11 <strong>Final Exam and Homework for Chapters 8-11 are Due</strong> Lab 15 and Lab Final</td>
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<tr>
<td>Class/Lab Schedule</td>
<td>Term ends, grades turned in by midnight. (Monday)</td>
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<tr>
<td>9</td>
<td>3/15 - 3/21</td>
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