**BIOLOGY 1411**

**MAN AND THE ENVIRONMENT (3-3)**

**About This Course**

Your life relies on a diversity of natural resources: the food we eat, the clothes we wear, and the materials with which we build houses, cars, and electronics all come from the Earth. As the number of people on the planet grows, more resources are needed to meet just our basic needs and most Americans’ desires are not very basic. “40 acres and a mule” or “a chicken in every pot” are no longer the standards for which we strive. Most of us want a car, a cell phone, and a comfortable place to live in an area that is not too crowded plus lots of good cheap food and clean water. All of these items come at a cost that is more than just money. Understanding how the Earth provides our needs and how our actions and decisions affect our planet is the topic for this semester.

The content of Biology 1411 includes generalizations and specifics of environmental biology. You are expected to understand and remember the facts presented and to demonstrate an ability to work with those facts. This information will be presented during lecture, in the laboratory and through reading your textbook and other assigned material.

Evaluation of each student will be based on performance in both the lecture section (75%) and the lab section (25%).

This course is part of the ASU core. The learning outcomes, assignments/general activities, and assessments are identified below.

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| **Course Level Learning Outcomes** | **Proposed 2014 Core Assignments/General**  **Learning Activities for the Core Objectives** | **Proposed 2014 Core Assessments** |
| **Bio 1411**  **CT1:** Students will gather, analyze, interpret and evaluate biological data.  **CS1:** Students will communicate information via written means on lab activities and projects.  **EQS1:** Students will collect and analyze quantitative data  **EQS2:** Students will make observations to test a hypothesis and generate conclusions based on their observations.  **TW2:** Students will work together on applied learning activities and collaborate with one another to support course goals. | **BIO 1411**  **CT1:** Students will conduct experiments in the lab, gather data and then analyze their results  **CS1:** Conduct lab experiments and communicate their findings in writing to each other and their instructor  **EQS1:** Students will take measurements as part of a lab experiment, analyze the data and generate conclusions.  **EQS2:** Students will make directed observations, gather data and then analyze their results  **TW2:** Students will conduct experiments in the lab in groups, gather data and then analyze their shared results | **BIO 1411**  **CT1 & CS1:** Analysis and conclusions will be assessed with a rubric  **CS1:** Analysis and conclusions will be assessed with a writing rubric  **EQS1-2:** Analysis and conclusions will be assessed with a rubric and quiz questions  **TW2:** Assessed using peer evaluations or embedded questions on their functioning as a team |

# Student Learning Outcomes

The objective of the study of the natural sciences is to enable the student to understand, construct, and evaluate relationships in the natural sciences, and to enable the student to understand the bases for building and testing theories. This course should help you:

1. To understand and apply method and appropriate technology to the study of natural sciences.
2. To recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry and to communicate findings, analyses, and interpretation both orally and in writing.
3. To identify and recognize the differences among competing scientific theories.
4. To demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies.
5. To demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.

# Attendance

You are expected to attend all lecture and lab periods. The single most important thing you can do to get a good grade in this course is to show up. I will take attendance regularly by passing out a sheet for you to sign or by having you turn in an assignment. Quizzes and other in-class activities may not be made up. You will get a zero on the assignment if you are not present.

# Exams

There will be four exams given during the semester, including a final exam. Each examination will include information presented in class and out of your textbook. Each test will be comprehensive - that is it will include material presented at any time during the course. This is unavoidable because early topics of discussion are built upon and expanded as the course progresses.

Exams will be mostly multiple-choice but may include a few short answer questions. Exams will cover material covered up through the last class day before the exam.

The final exam will be approximately twice the length and number of points as the previous exams. Missing an exam is a very serious matter. If you have a documented legitimate excuse, such as severe

personal illness, a death in your family, or a university-sponsored event, you must notify me before the

exam or very promptly afterward. I will work with you if you act responsibly. If you miss an exam for any other reason or do not notify me promptly then I will use the score you get on the final exam to replace ONE missing exam grade. You will receive a zero if you miss more than one exam.

As a reward to those of you who put in the necessary work, the final exam is optional if you have an “A” average in all of your work at the end of the semester. This includes both the lab and lecture portions of this course.

# Laboratory

Lab attendance is mandatory. Any lab you miss due to an unexcused absence cannot be made up, and for that lab you will receive a zero. If you are unsure about the validity of your excuse, please visit with your scheduled lab instructor. Any student who misses his/her regularly scheduled lab has **only** one chance to make it up. You must have written permission to attend the make-up lab. The make up lab each week begins at 1:00 pm on Friday (of the same week), in room 014 of the Cavness Science Building.

# Special Needs

Angelo State University cannot require a student to disclose that they have a disability. However, if you have a disability that requires special accommodation, you should contact the Office of Student Life, Room 100 in the Hardeman Building, phone 942-2191. ASU Faculty have been instructed by the University that “in order to maintain consistency in services across campus”, we are to provide no accommodation without authorization from the Office of Student Life.

# Final Grade Calculation

Your grade in this course will be determined by adding together all of the points you earn on your tests, quizzes and any other assignments and then dividing this number by the total number of points possible. “Extra credit or bonus” assignments will be added in to the total you earned without adding them into the number of possible points. This will be your lecture average. It is worth 75% of your course grade.

All of the scores on your laboratory exercises will be averaged together to determine your laboratory average. This is worth 25% of your course grade.

# Withdrawal From the Course

You are not automatically withdrawn from a course if you stop attending. If you stop attending and do not withdraw I am required to submit a grade for you. This “F” cannot be removed.