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|  NORTH CENTRAL TEXAS COLLEGECOURSE SYLLABUS |

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| Course Title: Environmental Biology |
| Course Prefix & Number: Biol 2406 | Section Number: 341,342 | Term Code: Spring 2019 |
| Semester Credit Hours: 4 | Lecture Hours: 48 | Lab Hours: 32 |
| Principles of environmental systems and ecology, including biogeochemical cycles, energy transformations, abiotic interactions, symbiotic relationships, natural resources and their management, lifestyle analysis, evolutionary trends, hazards and risks, and approaches to ecological research.  |
| Course Prerequisite(s):  |
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**INSTRUCTOR INFORMATION**

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| Name of Instructor: | Belinda H. Anderson |
| Campus/Office Location: | Bowie, Room 132 |
| Telephone Number: | (940) 872-4002 ext. 5217 |
| E-mail Address: | banderson@nctc.edu |

**OFFICE HOURS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Monday* | *Tuesday* | *Wednesday* | *Thursday* | *Friday* |
| Bowie | Graham | Bowie | Online |  |
| 12:30-3 | 6:30-7:45 Drive | 10:30-3 | 10-1 |  |
|  | 1-2 |  |  |  |
|  | 2-3:15 Drive |  |  |  |
|  | 3:15-5 Bowie |  |  |  |

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| Name of Chair/Coordinator:  | **Lisa Bellows Ph.D.** |
| Office Location: | **Gainesville Rm. 408 or 403** |
| Telephone Number: | **940-668-4252** |
| E-mail Address: | **lbellows@nctc.edu** |

**REQUIRED OR RECOMMENDED COURSE MATERIALS**

**Required text** *Required or Recommended Course Materials:*

*Principles of Environmental Science* 8th., Cunningham

ISBN 9780078036071

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**STUDENT LEARNING OUTCOMES** (From Academic Course Guide Manual/Workforce Education Course Manual/NCTC Catalog

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| *At the successful completion of this course the student will be able to:* |
|  | **Lecture Learning Outcomes**1. Explain the structure and impact of biogeochemical cycles.
2. Describe energy transformations across trophic levels.
3. Illustrate abiotic/biotic interactions and symbiotic relationships.
4. Identify various types of natural resources, human impact on these resources, and common resource management practices.
5. Quantify and analyze the impact of lifestyle on the environment.
6. Depict evolutionary trends and adaptations to environmental changes.
7. Describe environmental hazards and risks and the social and economic ramifications.
8. Describe ecological and statistical techniques and approaches used in the study of environmental biology.

**Lab Learning Outcomes**Upon successful completion of this course, students will:1. Apply scientific reasoning to investigate questions and utilize scientific tools such as microscopes and laboratory equipment to collect and analyze data.
2. Use critical thinking and scientific problem solving to make informed decisions in the laboratory.
3. Communicate effectively the results of scientific investigations.
4. Explain the structure and impact of biogeochemical cycles.
5. Describe energy transformations across trophic levels.
6. Illustrate abiotic/biotic interactions and symbiotic relationships.
7. Identify various types of natural resources, human impact on these resources, and common resource management practices.
8. Quantify and analyze the impact of lifestyle on the environment.
9. Depict evolutionary trends and adaptations to environmental changes.
10. Describe environmental hazards and risks and the social and economic ramifications.
11. Describe ecological and statistical techniques and approaches used in the study of environmental biology.
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**COURSE REQUIREMENTS, EVALUATION METHODS AND GRADING CRITERIA**

**GRADING CRITERIA**

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| **# of Graded Course Elements** | **Graded Course Elements** | **Percentage or Point Values** |
| 3 | Lecture Exams @ 180 points each | 540 |
| 13 | Lab Exercises | 230 |
| 1 | Lab Final | 100 |
| 13 | Lecture Discussions | 130 |
|  | Total Point Value | 1000 |

90% of total possible points=A, 80%=B, 70%=C, 60%=D and below 60%=F

Final grades will be determined on the basis of academic performance in both lab and lecture.

Exams will be evaluated and grades determined as quickly as possible and posted on Canvas. Grades WILL NOT be given out over the phone, nor will grades be discussed with any individual other than the student.

**Attendance is required**. Students are expected to log in at least once a week. Nine hours of absence from class/lab may result in dismissal from this course.

**Tentative Schedule**

**COURSE SUBJECT OUTLINE** (Major Assignments, Due Dates, and Grading Criteria)

**Week of**  **Chapter and Corresponding Module**

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| --- | --- |
| 01/22-01/25 | 1 (Module 1) |
| 01/26-02/01 | 2 (Module 2) |
| 02/02-02/08 | 3 (Module 3) |
| 02/09-02/15 | 4 (Module 4) |
| 02/16-02/22 | 5, **Exam 1** (Module 5) |
| 02/23-03/01 | 6 (Module 6) |
| 03/02-03/08 | 7 (Module 7) |
| 03/09-03/15 | Spring Break |
| 03/16-03/22 | 8 (Module 8) |
| 03/23-03/29 | 9-10 (Module 9) |
| 03/30-04/05 | 11,**Exam 2** (Module 10) |
| 04/06-04/12 | 12 (Module 11) |
| 04/13-04/19 | 13 (Module 12) |
| 04/20-04/26 | 14 (Module 13) |
| 04/27-05/03 | 15-16 (Module 14) |
| 05/04-05/10 | **Exam 3** (Module 15) |

**Lab Grades**

Your labs will consist primarily of videos you must watch and complete a quiz over. There will also be some discussion boards, surveys and a power point presentation that you will be responsible for. There will be a comprehensive lab final the last week of class that will cover the information learned in lab only. The following is a tentative outline of the lab material for each. As you can see, there is no Module 1 lab. Your labs will start the second week of classes and are structured this way to correspond with the subject we will be covering in lecture that week. You will be assigned your power point presentation early in the semester so you can get topic approval but will be given two weeks at the end of the semester to complete and turn it in. Module 13 will be due April 26.

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| Module 2 | Microscope Study | Quiz | 10pts. |
| Module 3 | Vermiculture Study | Quiz | 10pts |
| Module 4 | Ecological Footprints | Quiz | 10pts |
| Module 5 | Climate Change/Biomes | Quiz | 10pts |
| Module 6 | National Park Contest | Discussion/Vote | 20pts |
| Module 7 | How We Eat | Survey | 10pts |
| Module 8 | Light Pollution | Survey | 10pts |
| Module 9 | Landfill Tour | Quiz | 10pts |
| Module 10 | Waste Water Treatment Tour | Quiz | 10pts |
| Module 11 | Plastics  | Discussion | 10pts |
| Module 12 | Slum Tourism | Discussion | 10pts |
| Module 13 | Environmental Topic | Power Point Presentation | 100pts Due April 26 |
| Module 14 | Agrihood | Discussion | 10pts |
| Module 15 | Comprehensive Lab Final | Multiple Choice | 100pts |

The lab Modules (2-14) are worth a total of 230 points. The lab final will be worth 100 points and will consist of multiple choice questions over the topics and information learned in lab this semester. The total points you can earn for lab is 330 points.

**No classes Martin Luther King Day, January 21th.**

**Last day to Drop class with a W, April 4th.**

**Spring Break March 11-16**

**Finals Week May 11th -16th**

**ATTENDANCE POLICY**

Regular and punctual attendance is expected of all students in all classes for which they have registered. All absences are considered to be unauthorized unless the student is absent due to illness or emergencies as determined by the instructor. It is the student responsibility to provide documentation as to the emergency for approval and judgement by the faculty member. Approved college sponsored activities are the only absences for which a student should not be held liable and only when provided by a college official ahead of the absence. Valid reasons for absence, however, do not relieve the student of the responsibility for making up required work. Students will not be allowed to make up an examination missed due to absence unless they have reasons acceptable to the instructor. A student who is compelled to be absent when a test is given should petition the instructor, in advance if possible, for permission to postpone the exam. Student will be dropped from a class by the Registrar upon recommendation of the instructor who feels the student has been justifiably absent or tardy a sufficient number of times to preclude meeting the course’s objectives. Persistent, unjustified absences from classes or laboratories will be considered sufficient cause for College officials to drop a student from the rolls of the College. From Board Policy FC (LOCAL)

Last day to withdraw from a course with a “W” is \_\_\_\_\_April 4, 2019\_\_\_\_\_\_\_\_.

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**DISABILITY SERVICES** (Office for Students with Disabilities)

The Office for Students with Disabilities (OSD) provides support services for students with disabilities, students enrolled in technical areas of study, and students who are classified as special populations (i.e. single parents).

Support services for students with disabilities might include appropriate and reasonable accommodations, or they may be in the form of personal counseling, academic counseling, career counseling, etc. Furthermore, OSD Counselors work with students to encourage self-advocacy and promote empowerment. The Counselors also provides resource information, disability-related information, and adaptive technology for students who qualify.

If you feel you have needs for services that the institution provides, please reach out to either Wayne Smith (940) 498-6207 or Yvonne Sandman (940) 668-3300. Alternative students may stop by Room 170 in Corinth or Room 111 in Gainesville.

**CORE CURRICULUM FOUNDATIONAL COMPONENT AREA** (For classes in the Core)\_\_\_\_\_\_\_\_

 Communication

 Mathematics

X Life and Physical Science

 Language, Philosophy & Culture

 Creative Arts

 American History

 Government/Political Science

 Social and Behavioral Sciences

 Component Area Option

**REQUIRED CORE OBJECTIVES** (For classes in the Core)

X Critical Thinking

X Communication

X Empirical and Quantitative

X Teamwork

 Personal Responsibility

 Social Responsibility

**COURSE TYPE**

X Academic General Education Course (from ACGM but not in NCTC Core)

**X** Academic NCTC Core Curriculum Course

**** WECM Course

**STUDENT HANDBOOK**

Students are expected to follow all rules and regulations found in the student handbook and published online.

**ACADEMIC DISHONESTY**

Scholastic dishonesty shall include, but is not limited to cheating, plagiarism, academic falsification, intellectual property dishonesty, academic dishonesty facilitation and collusion. Faculty members may document and bring charges against a student who is engaged in or is suspected to be engaged in academic dishonesty. See Student Handbook, “Student Rights & Responsibilities: Student Conduct ([FLB(LOCAL)]”.