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| NORTH CENTRAL TEXAS COLLEGECOURSE SYLLABUS |

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| *Course Title:*  | BIOL 2406 Environmental Biology |
| *Course Prefix & Number:*  | BIOL 2406 | *Section Number:*  | 01 | *Semester/Year:*  | Spring 2020 |
| *Semester Credit Hours:*  | 4 | *Lecture Hours:*  | 3 | *Lab Hours:*  | 1 |
| *Course Description (NCTC Catalog):* 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):*  |
| *Required Course Materials:* **Lecture Book***Principles of Environmental Science* 9th edition, Cunningham and CunninghamISBN 978-0078036071 |

**INSTRUCTOR INFORMATION**

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| *Name of Instructor:* | Alexandria Wells, M.S.  |
| *Campus/Office Location:* | Gainesville High School |
| *Telephone Number:* | Contact me via email |
| *E-mail Address:* | awells@nctc.edu |

**OFFICE HOURS**

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| --- | --- | --- | --- | --- |
| *Monday* | *Tuesday* | *Wednesday* | *Thursday* | *Friday* |
| **9:05-10:00 am** | **9:05-10:00 am** | **9:05-10:00 am** | **9:05-10:00 am** | **9:05-10:00 am** |
| **3:05- 4:00 pm** | **3:05- 4:00 pm** | **3:05- 4:00 pm** | **3:05- 4:00 pm** | **3:05- 4:00 pm** |
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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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**GRADING CRITERIA**

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| *# of Graded Course Elements* | *Graded Course Elements* | *Percentage or Point Values* |
| 12 graded Discussion posts@15 points each | Available in CANVAS, consult Discussion Post etiquette and expectations for further details**Will Drop the 2 Lowest.** | 150 points |
| 7 graded Chapter questions@25 pts each | Available in CANVAS, submitted within appropriate module | 175 points |
| 7 Lab Activities @ 20 points each | These will be submitted in CANVAS/in Class**Will Drop the 2 Lowest.**  | 125 points |
| 4 unit exams @ 100 pts each | These exams will be over lecture materials | 400 points |
| Semester Project | This will consist of a 2 part project Part 1: Research Proposal Paper Part 2: Video PSA | 150 points |

**TOTAL points**: 1000. Grades are determined as follows: A= 900+ points; B= 800-899 points; C= 700-799 points; D=600-699 points F=<600 points

**NO MAKE-UP EXAMS WILL BE GIVEN.**

***Science education should train students to BE scientists (wonder, question, gather data, draw conclusions) rather than only learn what scientists have discovered in the past; that’s called history-Allison Stuart***

**PARTICIPATION & HOMEWORK POLICY**

Students are expected to participate by attending lectures and labs, asking questions, commenting (respectfully) on subject matter, engaging in the discussions and taking appropriate notes. Homework and lab assignments are due by the stated time on the homework/ lab sheet. **No late assignments will be accepted.** They are not to be completed in class on the date they are due! If a series of discussion questions are asked to the class, participation points will be given to students that actively and thoughtfully contribute to the discussion. Students are expected to participate in all lab exercises and attend all field trips unless arrangements are made with the instructor beforehand. For group projects, labs and class work the *minimum* number of students to a group is 2- Students must work with at least one other person when directed by the instructor.

**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 judgment 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. If extra time is allowed for a student the assignment must be completed within a week of when it was handed to the class. 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)

*Absences exceeding 9 contact hours of lecture and or laboratory of BIOL 2406 may result in the student being dropped from the course. It shall be at the discretion of the instructor to drop students who are absent in excess of 9 contact hours.*

Last day to withdraw from a course with a “W” is **April 3, 2020.**

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| If a student cannot complete all the requirements of this course due to illness or some unavoidable conflict, they must request in writing a grade of “I” (incomplete) in order to be allowed to finish the requirements at a later date. When the instructor receives the request, he/she must reply in writing to the request, explaining why the grade of “I” will or will not be assigned. |

**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

 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)

 Critical Thinking

 Communication

 Empirical and Quantitative

 Teamwork

 Personal Responsibility

 Social Responsibility

**COURSE TYPE**

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

**** 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)]”.

Consequences for academic dishonesty may include:

1. A zero “0” for the assignment and/or Exam.
2. In the case of a 2nd offense, there will be immediate suspension for the semester

**CELL PHONE POLICY**

Cell phones must be silenced during class time. Your full attention is needed in class for your success; therefore, if you use electronic devices for non-class activities you may be asked to leave or put them away at the discretion of the instructor. When allowed by the professor, you may use electronic devices to help you during lab or lecture group work. Cell phones and other electronic devices need to be silenced and put away during Exams/ Quizzes.

**QUESTIONS, CONCERNS, or COMPLAINTS**

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| Name of chair/coordinator: | Dr. Lisa Bellows |
| Office Location: | Gainesville Science Building Office 403A |
| Telephone Number: | 940-668-4252 |
| E-mail Address: | lbellows@nctc.edu |

**COURSE SUBJECT OUTLINE** (Major Assignments & Due Dates)

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| Week | Date | Lecture | Reading  | Homework | Lab Activities |
| 1 | Jan 21-26 | Syllabus; Ch. 1  | Ch. 1; Ch. 16 Policy | Week 1 Topic**Ch.1 & 2 ?’s** |  |
| 2 | Jan 27-Feb 2 | Ch. 2  | Ch. 2 |  Week 2 Topic | Hypothesis Generating & Testing  |
| 3 | Feb 3-9 | Ch. 3 | Ch. 3 |  Week 3 Topic **Ch. 3 & 5 ?’s** | Energy Pyramids and Biomagnification |
| 4 | Feb 10-16 | Ch. 5  | Ch. 5 |  Week 4 Topic | Gathering & Interpreting Web Info |
| 5 | Feb 17-23 | Ch. 6  | Ch. 6; Ch. 16 Endangered Species |  Week 5 Topic**Ch. 6 & 4 ?’s** | Biodiversity |
| 6 | Feb 24- Mar 1 | Ch. 4 | Ch. 4 |  **Exam #1**  | STD & Pregnancy |
| 7 | Mar 2-8 | Ch. 7  |  Ch. 7 |  Week 7 Topic**Ch. 7 & 14 ?’s** | **TBD** |
|  8 | Mar 9-15 | Ch. 14 | Ch. 14; Ch. 16 Superfund Act |  Week 8 Topic | Environmental Organizations |
|  | Mar 16-21  | **SPRING BREAK** |  |  |  |
| 9 | Mar 22-29 | Ch. 8  | Ch. 8 |  **Exam #2****Ch. 8 & 12 ?’s** | **TBD** |
| 10 | Mar 30- Apr 5 | Ch. 12  | Ch. 12 |  Week 10 Topic  | **TBD** |
| 11 | Apr 6-12 | Ch. 11  | Ch. 11; Ch. 16 Water Quality |  Week 11 Topic **Ch. 11 & 9 ?’s** | Invasive Species |
|  12 | Apr 13-19 | Ch. 9 | Ch. 9 | Week 12 Topic  | Water Quality |
| 13 | Apr 20-26 | Ch. 10/13 | Ch. 10; Ch. 16 Air Quality | Week 13 Topic**Ch. 10, 13, & 15 ?’s** | Climate Change |
| 14 | Apr 27- May 3 | Ch. 13/ 15 |  Ch. 13 |  Week 14 Topic  | Project Prep |
| 15 | May 4-10 | **Review** |  | **Exam #3****Final Project Due** | **Project Presentations** |
| 16 |  May 11-16 | **COMPREHENSIVE FINAL EXAM** | FINALS | FINALS | FINALS |
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