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| **NORTH CENTRAL TEXAS COLLEGE****COURSE SYLLABUS** |

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| *Course Title:*  | BIOL 2406 Environmental Biology |
| *Course Prefix & Number:*  | BIOL2406 | *Section Number:*  | 840 | *Semester/Year:*  | SP 2021 |
| *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 or Recommended Course Materials:**Principles of Environmental Science* 9th, CunninghamISBN 9781260219715 |

**INSTRUCTOR INFORMATION**

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| *Name of Instructor:* | Elizabeth McClinchie |
| *Campus/Office Location:* | PPHS |
| *Telephone Number:* |  |
| *E-mail Address:* | emcclinchie@nctc.edu |

**OFFICE HOURS**

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| --- | --- | --- | --- | --- |
| *Monday* | *Tuesday* | *Wednesday* | *Thursday* | *Friday* |
| **7:40-8:40** | **7:40-8:40** | **7:40-8:40** | **7:40-8:40** | **7:40-8:40** |
| **3:35-4:45** |  | **3:35-4:45** |  |  |
| Or by appointment  |

**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* |
| 3 | Lecture Homework Assignments | 18% |
| 12 | Reading Quizzes (Mondays starting Week 3) | 10% |
| 3 | Lecture Exams | 45% |
| 1 | Optional Comprehensive Final Exam | \*15% |
| 12 | Laboratory Assignments (drop lowest 2) | 12% |
| 1 | Laboratory Project and Presentation | 15% |

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

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| **Week** | **Date** | **Lecture** | **Reading**  | **Homework** | **Lab** |
| **1** | **Jan 19-22** | **Understanding our Environment**  | **Ch. 1, Ch. 16.1 Policy** |  | **Safety & Microscopes** |
| **2** | **Jan 25-29** | **Environmental Systems** | **Ch. 2** | **HW 1 Due Jan. 29** | **Nutrient Cycles (Worm Composting)** |
| **3** | **Feb 1-5** | **Evolution, Species Interactions** | **Ch. 3** |  | **Food Webs (Owl Pellets)** |
| **4** | **Feb 8-12** | **Biomes & Biodiversity** | **Ch. 5** |  | **Sampling (Entomology)** |
| **5** | **Feb 16-19** | **Envir. Conservation** | **Ch. 6; Ch. 16 End. Species** | **Exam 1 Feb 19** | **Biodiversity/Community Structure** |
| **6** | **Feb 22-26** | **Human Populations (+ Food & Agriculture)** | **Ch. 4; Ch. 7** |  | **Population Biology** |
| **7** | **March 1-5** | **Finish F&A Solid & Hazardous Waste** | **Ch. 14; Ch. 16 Superfund Act** | **HW 2 Due March 5** | **Soil Testing & Food and Agriculture** |
| **8** | **March 8-12** | **Environmental Health & Toxicology** | **Ch. 8** |  | **Consumption (Solid Waste Assessment & Ecological Footprints)** |
| **Spring Break March 15-19** |  |  |  |
| **9** | **March 22-26** | **Geology & Earth Resources** | **Ch. 12** | **Exam 2 March 26** | **National Parks** |
| **10** | **Mar29-Apr1** | **Water** | **Ch. 11, 16 (Clean Water Act)** |  | **Water Quality** |
| **11** | **April 5-9** | **Climate** | **Ch. 9** |  | **Water Treatment Plant Field Trip Apr. 6** |
| **12** | **April 12-16** | **Air Pollution** | **Ch. 10, 16 (Clean Air Act)** | **HW 3 Due April 16** | **Air Quality** |
| **13** | **April 19-23** | **Energy** | **Ch. 13** |  | **Project Prep** |
| **14** | **April 26-30** | **Economics** | **Ch. 15** |  | **Project Presentations** |
| **15** | **May 3-7** | **Review** |  | **EXAM 3** | **Tragedy of the Commons**  |
| **16** | **May 10-14** | **Final Exams**  |  |

**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 5, 2021\_\_\_\_\_\_\_\_.

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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

 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. Academic probation for the rest of the semester
2. In the case of a 2nd offense, there will be immediate suspension for the semester

**QUESTIONS, CONCERNS, or COMPLAINTS**

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| Name of Chair/Coordinator:  | Dr. Lisa Bellows |
| Office Location: | Gainesville Science Building Office 408 |
| Telephone Number: | 940-668-4252 |
| E-mail Address: | lbellows@nctc.edu |

Syllabi Statements Spring 2021 - COVID-19 Specific

**Conversion of Onsite Classes to Online/Remote Format:** North Central Texas College students should be aware that in the event of a college closure due to COVID-19, onsite classes will be converted to an online/remote format. Students should plan ahead to ensure they have access to the computer equipment (either PC, MAC, or tablet), webcam, and internet connectivity to continue their classes in an online/remote format. Please read all your official North Central Texas College student emails as the transition from onsite to online/remote might require a reorganization in your personal situation. Students will be granted a 72-hour transition and grace period. Online classes will continue as scheduled without disruption. Wear a mask, stay safe, and contact your Instructor as the situation arises. These policies and procedures were updated on July 30, 2020 and are subject to change as conditions change.

**Face Coverings:** Per the North Central Texas College guidance on face coverings on campus, in the instructional setting, faculty and students must wear face coverings, such as masks or face shields. Students without coverings, or those who do not comply with the rules relating to face coverings, will not be able to participate in on-campus classroom activities. To request an exception to this requirement, students should contact the NCTC HR Office of Enrollment Management (ccove@nctc.edu). Failure to comply with the face coverings requirement may result in the Instructor directing the student to leave the classroom. Any student asked to leave the classroom may be referred to the student conduct officer. These policies and procedures were updated on July 30, 2020 and are subject to change.

**Temporary COVID-19 Attendance Policy for Face-to-Face Meetings:** We are facing an unprecedented situation in which all of us must be flexible and make prudent decisions in the best interest of our families, our campus, and our community. In light of this, North Central Texas College is temporarily establishing the requirement that faculty keep records of student attendance for face-to-face course meetings as well as a documented seating chart. In addition, students who are sick or need to quarantine should not attend classes. Students will not be required to provide formal documentation from a health care provider and will not be penalized for COVID-19 related absences when proper notification to campus health officials is made in accordance with the guidelines stated below.

**Faculty will:**

· Notify students about important course information and delivery changes through Canvas and campus email.

**Students should:**

· Provide notification to campus officials (via NCTC Daily Health Check protocol through Canvas) if they have tested positive for COVID-19 or have to quarantine so we can confirm reported absence with instructors, monitor, and assist the campus community.

· Notify instructors in advance of the absence.

· Connect with that class through Webex if the class session is being transmitted in a hybrid fashion.

· Keep up with and/or make up missed classwork or assignments.

· Submit assignments digitally through Canvas or other means as announced by your instructor.

· Work with their instructors to reschedule exams, labs, and other critical academic activities described in the course syllabus.

· Check Canvas and campus email daily to receive important announcements pertaining to the course.

During the spring 2021 semester, faculty with face-to-face meetings will establish assigned seating/work stations to facilitate roll-taking, and, if necessary, contact tracing. Additionally, we ask all members of the College community to be attentive to their health, and safeguard others, by following the CDC’s guideline to “stay home when you are sick.” You should stay home if you have symptoms. More information on what to do if you are sick is available at the CDC’s website.

Additional NCTC information is available at<http://www.nctc.edu/coronavirus/index.html>