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| |  | | --- | | NORTH CENTRAL TEXAS COLLEGE  COURSE SYLLABUS | | | | | | | | |
| *Course Title:* | BIOL 2406 Environmental Biology | | | | | |
| *Course Prefix & Number:* | | Biol 2406 | *Section Number:* | 500, 501, & 502 | *Semester/Year:* | FA 2017 |
| *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* 8th., Cunningham  ISBN 9780078036071  Gloves and scantrons (100 question/2 sided forms) | | | | | | |

**INSTRUCTOR INFORMATION**

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| *Name of Instructor:* | Heather Does-Krell, M.A. |
| *Campus/Office Location:* | Flower Mound, Rm 107 |
| *Telephone Number:* | Contact via email or canvas message |
| *E-mail Address:* | hkrell@nctc.edu |

**OFFICE HOURS**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Monday* | *Tuesday* | *Wednesday* | *Thursday* | *Friday* |
| **1-2PM** | **10-11AM** | **1-2PM** | **10-11AM** |  |
| Or by appointment – please email or Canvas message to schedule | | | | |

**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. |

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

See the last page of syllabus for tentative course schedule

**GRADING CRITERIA**

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| --- | --- | --- |
| *Frequency* | *Graded Course Elements* | *Percentage or Point Values* |
| Weekly | Lecture Classwork and Homework – consisting of quizzes, individual and group assignments will be given class and in Canvas  \*The lowest grade will be dropped | 10% |
| 4 per semester | Unit Homework Assignments | 10% |
| 4 Unit  1 Final | 4 Lecture Exams – consisting of multiple choice and short answer/essay questions  **1 Optional Comprehensive Final will be offered as a make-up for any missed exams or to replace the lowest exam grade.** | 40% |
| Daily | Lecture Attendance and Participation – taken daily in lecture | 5% |
| Weekly | Laboratory Classwork, Homework, and Attendance/Participation  \*The lowest grade will be dropped | 20% |
| Weekly | Laboratory Quizzes – consisting of multiple choice questions in Canvas \*The lowest grade will be dropped | 10% |
| 2 per semester | Team Member Evaluations – team members will evaluate your performance and contribution to the group in lecture and lab. | 5% |
| **Total points** |  | **100%** |

**\*\*Missed assignments cannot be made up and late work will not be accepted under any circumstances unless documentation has been provided for an approved college sponsored activity. See attendance policy below.**

**GRADING SCALE: 89.5 – 100% = A, 79.5 - 89% = B, 69.5 - 79% = C, 59.5 – 69% = D, Below 59.5% = F**

**TENTATIVE EXAM DATES: Exam 1: MW – Sep 6th, TR -Sep 7th Exam 2: MW – Sep 27th, TR – Sep 28th Exam 3: MW – Oct 30th, TR –Oct 31st, Exam 4: MW – Dec 4th, TR – Dec 5th**

**FINAL EXAM DATES: Section 500/501: Wed, Dec 13th 2-3:50 Sec 502: Tue, Dec 12th 11-12:50**

**EXAMS:**There will be 4 regular exams and 1 comprehensive final offered during the course of the semester (see tentative dates above). Students are expected to take exams on the date given. As noted previously, the lowest exam grade will be dropped and for this reason, **make-up exams will not be offered for any reason except for approved college sponsored activities**. Exams will be multiple choice, completion, and short answer/essay. Students will not be allowed to leave class during exams for any reason and all electronic devices must be completely out of sight and turned off. **Any student caught cheating during an exam will be given a zero for that assignment. Any use of electronic devices during exams will be considered cheating.** Please take care of restroom needs PRIOR to the start of any exam; you will not be allowed to leave the room during the exam for any reason unless it has been completed and turned in. Students arriving late on exam day will not be allowed to take the exam if another student has already turned theirs in and left the room.

**OTHER REQUIREMENTS:** You must have access to the Canvas network and or Canvas app. Assigned readings, individual assignments and course materials will be distributed through Canvas. Go to the North Central Texas College website ([www.nctc.edu](http://www.nctc.edu)) to activate your Canvas account at the start of this course. You will have an assignment to submit within the first week of class. I will go over how to use the Canvas network in class, but if you have any questions about this system please ask before it is too late. You should be in the habit of checking Canvas on a regular basis to keep up with announcements and course requirements. I recommend setting up push notifications through the Canvas app to alert you to announcements, deadlines, etc.

**LEARNING TEAMS:** You will be assigned to a learning team the first week of class, which you will work with for the duration of the semester in lecture and lab. In-class team work will take place during the first 15-30 minutes of class, so for that reason please plan on arriving on time to each class and sit with your team members. Many of your assignments and quizzes will be completed as team assignments. You are expected to come to class prepared to work with your team and actively participate. Be sure to exchange contact information with your team members within the first week. Your team members will evaluate your participation efforts in the middle and end of the course.

**PARTICIPATION:**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. The required textbook is a valuable resource of information and students will be expected to keep up with its reading. Grades will be taken in the form of pop quizzes, discussion participation, group work, and homework assignments. Lecture quizzes are un-announced and will be given to ensure that the textbook is being read and these cannot be made up. Students are expected to participate in all lab exercises and attend all field trips unless arrangements are made with the instructor beforehand. Students must take responsibility for their own learning.

**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**.\*(see below)** 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**.\*(see below)** 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)

**\*Missed assignments cannot be made up and late work will not be accepted under any circumstances unless documentation has been provided for an approved college sponsored activity. Make-up exams will not be offered for any reason except for approved college sponsored activities**.

**Last day to Withdraw for the Fall 2017 semester with a “W” is Thursday, November 9th, 2017**

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.

Since the goal of this course is to engage students in active discussions utilizing critical thinking skills, there will not be adequate class time to cover all the course material in lecture format. Note however, that approximately 60 -80% of the tested material will come from the brief verbal lectures, class discussions/assignments, and PowerPoint lectures. The remaining material will come from the required textbook readings and completion of textbook outlines and Canvas material.

**DISABILITY SERVICES - 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**

X Critical Thinking

X Communication

X Empirical and Quantitative

X Teamwork

X Personal Responsibility

X Social Responsibility

**COURSE TYPE**

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

XAcademic 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.

**ELECTRONIC DEVICES:** Electronic devices 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, 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. **Any use of electronic devices during exams or quizzes will result in a zero for the assignment.**

**NCTC TOBACCO-FREE POLICY:** NCTC restricts the use of all tobacco products including cigarettes, cigars, pipes and smokeless tobacco on campus property.

**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” will be given for the assignment/quiz/exam 2) Offense reported to the academic dean

**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 |

**ENVIRONMENTAL BIOLOGY – TENTATIVE\* LECTURE & LAB SCHEDULE FALL 2017**

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| --- | --- | --- | --- |
| **Week** | **DATE** | **LECTURE TOPICS** | **LAB** |
| 1 | Aug 28-Sep 1 | Intro to Course/Syllabus, Chapter 1 Intro to Environmental Science | Lab Introduction, Canvas, Safety |
| 2 | Sep 4-8 | Chapter 2 Environmental Systems,  **Exam I – complete in Canvas** | Scientific Method/Measurement |
| 3 | Sep 11-15 | Chapter 3 Evolution, Species Interactions, Communities | Food Webs, Biogeochemical Cycles |
| 4 | Sep 18-22 | Chapter 5 Biomes & Biodiversity | Biodiversity – Racing Extinction |
| 5 | Sep 25-29 | Chapter 6 Environmental Conservation, **Exam II** | Marine Fisheries |
| 6 | Oct 2-6 | Chapter 4 Human Populations | Invasive Species |
| 7 | Oct 9-13 | Chapter 7 Food and Agriculture | Food and Agriculture – King Corn |
| 8 | Oct 16-20 | Chapter 8 Environmental Health & Toxicology | Soil Analysis |
| 9 | Oct 23-27 | Chapter 9 Climate | Climate Change |
| 10 | Oct 30-Nov3 | **Exam III**, Chapter 10 Air Pollution | Lifestyle Analysis |
| 11 | Nov 6-10 | Chapter 11 Water | Field Trip –Water Treatment Plant |
| 12 | Nov 13-17 | Chapter 13 Energy | Water Quality |
| 13 | Nov 20-24 | Chapter 12 Geology and Earth Resources, THANKSGIVING BREAK | Project Preparation - THANKSGIVING BREAK |
| 14 | Nov 27-Dec 1 | Chapter 14 Solid & Hazardous Waste | Field Trip - Landfill |
| 15 | Dec 4-8 | **Exam IV, Final Review** | Poster Presentations |
| Finals | Dec 11-15 | **Comprehensive Final Exam** | **Finals Week - No Labs** |

**\*Exam dates, lecture material, and lab schedule are tentative and subject to change at the instructor’s discretion**