ENVIRONMENTAL BIOLOGY - ESCI 3443

Department of Environmental Science
[Fall] 2015

A. COURSE INFORMATION

Course number/section: ESCI 3443 001
Class meeting time: Lecture TR 8:00 am-9:15 am IH 268
Class location: Labs: T 11:00 am-12:50 pm CI 214
Labs: R 02:00 pm- 3:50 pm CS214

Course Website: https://bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

Instructor: Mark C. McKay
Office location: NRC 3401
Office hours: 10am daily (by appointment preferred. Appointment may be held in HRI 307)
Telephone: 209/304-6525
E-mail: mmckay@islander.tamucc.edu, mmckay95376@gmail.com
Appointments: please call or text for an appointment. There are days I am in the lab and days I am in the field

C. COURSE DESCRIPTION

Catalog Course Description
None
Extended Course Description
This course is described as the historical, contemporary and projected concerns of human activities on biological aspects of functioning ecosystems. The student learning outcomes of this course is to establish criteria determining the evolution of life on Earth with special emphasis on human interaction. This course covers topics of a diverse nature: origins of life on Earth, biogeochemistry, ecological principles, biodiversity, biological succession, human population dynamics, demographic transition, renewable resources, air/water pollution, global climate change, deforestation, environmental toxicology, and Environmental politics. As part of lab, students will be required to report views regarding important global, regional and local environmental issues. After taking this course, the Student will be able to discuss concepts relevant to environmental biology, critically Evaluate issues and present viewpoints associated with these issues.

D. PREREQUISITES AND COREQUISITES

Prerequisites
None. A knowledge of statistics used in Ecology would be useful, as would some knowledge of Geographical Information Systems. Don’t worry if you don’t have a lot of experience with these areas, you will receive training

Co-requisites
Ability to work in the field

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)
You may wish to come to the first class before purchasing this to explore options. Riding assignments will be made from the book, and answers to quiz questions will be there also.

Essential Environment: The science behind the stories, 5th ed. Jay Withgott & Mathew Laposata

Optional Textbook(s) or Other References
You will be assigned papers to read and evaluate. Any software that you need will be provided at no cost.

Supplies
Please being laptops, tablet and iPhone or Android phones to class. They will be used in lecture and lab.

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.

By the end of this course, students should be able to:

1.) Learn and be able to characterize the various types of environmental issues affecting society;
2.) Be able to describe the common types of environmental systems, perturbations, and mitigating solutions that affect the environment;
3.) Acquire sufficient knowledge to explain the effects of global warming, pollution, and resource management regarding the environment; and
4.) Be competent to describe the interactions and impacts of humans on the environment.
5.) Make use of available geospatial tools in order to carry out environmental investigations
6.) In teams, design carry out, analyze data from an environmental investigation of the students choosing. The results of this investigation will be presented in two ways. One is the construction and presentation of a scientific poster at a scientific meeting. In the case of this class, this will be at the TAMUCC Marine Science Graduate Students Organization Research Symposium, and the students will produce a short, edited video that chronicles the process of the investigation.

G. INSTRUCTIONAL METHODS AND ACTIVITIES

This class will be a combination of reading assigned text, participating in discussions and lectures, a weekly laboratory, and numerous quizzes. All quizzes and tests, with the exception of the final will be done online in Blackboard. There are two types of quizzes. The first type is the “weekly quiz” and there will be six of these, each worth 10 points, and I will drop your lowest scored quiz for a total of 50 points available. These will be online, open note, and untimed. However, once you start it, it will stay open until you submit it. If left open too long it will close automatically and not allow you to retake it. There will be a posted time when the quiz will be available and a posted time when it cannot be attempted. DO NOT WAIT TO THE LAST MINUTE TO TAKE THE QUIZ!!!!! Anticipate technology problems ahead of time and let me know if one arises. Be forewarned, I have done a good deal of teaching online and know every excuse. I’m flexible but let’s make it easy and take things onetime please.

The second type of quiz is called a “Homework Quiz”. There will be three of these, each worth 25 points and I will drop your lowest for a total of 50 points. This will also have a definite open and close time but will be timed. This means that you will have a precise amount of time to answer questions that will be based upon reading, notes, and techniques (geospatial) taught in class. This quiz will be open note but you need to have read the material beforehand because once you start the quiz you won’t have time to search for information, instead you will have to know the material ahead of time. Again, my same admonition goes, DON'T WAIT TO THE LAST MINUTE TO TAKE THE EXAM. Forgetting to take an a quiz is not an excuse and I will not be likely to open it up after the end date. We have a scheduled midterm worth 75 points that will also be timed and online. The Final will not be online and will occur at the time and date schooled by the university.

There will be a class project required in which you will be working in groups and will be worth 100 points. This will be a geospatially based environmental investigation of your groups design and will be worth 100 points. You will receive more information on this project at the first or second meeting of the class. You will not need special licenses for this project, and all data collection can occur with free apps available for smartphone or tablets. IF you do not possess such a device don’t worry, we will put you in a group with others that do. You will be trained on the use of the software that is easy to use and very powerful. Please note, you will be required to present this research, in the form of a Poster at a scientific meeting in December. More on this second day of class.
This year I decided to expand the research component and will also require each team to submit a edited videotape, that describes their research project, provide scenes of students collecting data, and discuss their results. His will be worth 50 points so it needs to be completed. If you don’t have access to video editing software please come talk to me. I have several excellent open source programs I can help you with.

Finally, there is a separate and substantial laboratory portion to this class and all students are expected to participate. Safety is a key issue in this class and all safety procedures will be enforced. A separate syllabus for the lab portion will be provided you on the first day of lab.

A breakdown of class activities and their point values is listed below. I do reserve the right to make adjustments to the point values of assignments or assessments. I will however only do so if it is to the advantage to students:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage of Overall Grade</th>
<th>Total</th>
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<tbody>
<tr>
<td>Weekly Quizzes</td>
<td>5 x 10 points each</td>
<td>50 points</td>
</tr>
<tr>
<td>Homework quizzes</td>
<td>2 x 25 points each</td>
<td>50 points</td>
</tr>
<tr>
<td>Paper Reviews</td>
<td>2 x 25 points each</td>
<td>50 points</td>
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<tr>
<td>Midterm</td>
<td>1 x 75 points</td>
<td>75 points</td>
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<tr>
<td>Project/Poster</td>
<td>1X 100 points</td>
<td>100 points</td>
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<tr>
<td>Team Video</td>
<td>1X 50 points</td>
<td>50 points</td>
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<tr>
<td>Lab</td>
<td>1 X 150 points</td>
<td>150 points</td>
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<tr>
<td>Final Exam</td>
<td>1 x 75 points</td>
<td>75 points</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>600 Points</strong></td>
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Peer-review will be a common method of evaluation. Please be prepared to work with other students in a professional and collaborative fashion both in and out of class.

Late assignments will be penalized by loss of 1 letter grade per day late; if more than 3 days late, no credit will be given. Plagiarism will not be tolerated.

Your final grade will be based the standard 100 percent grading scale.

A = 90 – 100 %
B = 80 – 89 %
C = 70 – 79 %
D = 60 – 69 %
F = ≤ 60 %
I. **COURSE CONTENT/SCHEDULE**

This schedule is tentative. Some topics may go longer or be cut short, depending on student needs and competencies. Assignment due dates will be announced when assignments are made. **It is your responsibility** to keep up with changes to this outline. I reserve the right to change topics and chapters at my discretion. Any changes will be announced to the class and on Blackboard well ahead of time.

<table>
<thead>
<tr>
<th>Week</th>
<th>Subject/Topic/Assignment</th>
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<tbody>
<tr>
<td>08/27</td>
<td>Syllabus, introductory comments</td>
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<tr>
<td>09/01</td>
<td>Syllabus, introductory comments/Introduction to Geospatial Tools used this term&lt;br&gt;Chapter 1: Science and sustainability/<em>Weekly Quiz</em> (Due Friday online)&lt;br&gt;LAB: Subject to be announced/Geospatial practice assignment</td>
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<tr>
<td>09/08</td>
<td>Chapter 2: Environmental Systems/<em>Weekly Quiz</em>&lt;br&gt;LAB: TBA</td>
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<td>09/15</td>
<td>Chapter 3: Evolution, Biodiversity and Population Ecology&lt;br&gt;<em>Homework Quiz</em> (by Friday)&lt;br&gt;LAB: Introduction to term project/assignment of teams</td>
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<tr>
<td>09/22</td>
<td>Chapter 4: Species Interactions and Community Ecology&lt;br&gt;No weekly quiz: in class assignment&lt;br&gt;LAB: TBA</td>
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<tr>
<td>09/29</td>
<td>Chapter 5: Environmental Economics and Policy/<em>Weekly Quiz</em>&lt;br&gt;“Potential Report out from Groups in class”&lt;br&gt;LAB: TBA</td>
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<tr>
<td>10/06</td>
<td>Chapter 6: Human Population</td>
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<tr>
<td>10/14</td>
<td>In Class Review Session for Midterm&lt;br&gt;<em>Midterm Opens 10/16 online</em>: Due Date TBA (we will discuss this)&lt;br&gt;LAB: TBA</td>
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<tr>
<td>10/20</td>
<td>Chapter 7: Soil, Agriculture, and the future of Food/*No weekly quiz&lt;br&gt;LAB:TBA</td>
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<tr>
<td>Date</td>
<td>Topic</td>
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<tr>
<td>10/27</td>
<td>Chapter 8: Biodiversity and Conservation Biology/Weekly quiz</td>
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<tr>
<td>11/03</td>
<td>Chapter 9: Forests/Forest Management/Protected Areas/Weekly Quiz</td>
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<td>11/10</td>
<td>Chapter 10: Environmental Health and Technology</td>
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<td>11/17</td>
<td>Chapter 12: Fresh Water Oceans and Coasts</td>
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<td>11/24</td>
<td>Assigned reading: Energy Issues/Homework Quiz (Due after Holiday- don’t forget)</td>
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<td>12/1</td>
<td>Term Project Due MSGO Symposium (Dec 2) Video Projects due</td>
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<td>12/4</td>
<td>8:00am Final Exam (Written)</td>
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Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor. The assignments and exams shown are directly related to the Student Learning Outcomes described in Section F.

J. **COURSE POLICIES**

**Attendance/Tardiness**
I know this class is early in the morning, and I do take equal participation which is part of your participation grade. Some of you come from long distances and I understand traffic at times can be an issue. Please try and plan for that. If you are going to be later or absent, please SAFELY text me.

**Late Work and Make-up Exams**
All work is turned in via Blackboard. Each assignment has a timer, at a certain time and date the assessment, assignment closes. You are given ample time to get the work turned in. I will take late work but it will receive a deduction of 1 letter grade per 24 hours.
late. Up to 5 days

Extra Credit
None given

Communication Devices during lecture and lab:
Electronic communication devices should be in silent mode during class. If you need to use them, please do so in a manner that does not interfere with or distract other students from the learning experience. If an emergency call has to be answered, please walk unobtrusively out of the class, finish the conversation, and return to your seat equally unobtrusively.
The use of laptop computers or tablets is permissible in class and highly encouraged. We live in a mobile society and the use of such devices can, when properly used, be a tool for professional growth. While not required, I would encourage students to bring whatever data device they normally use to class every week. You will receive assignments electronically (Blackboard) and will also have journal articles that you will be responsible for reading and understanding. I wish to minimize the amount of paper that needs to be distributed to and from students as a part of this class.

Missed Exam
This should not be an issue. All quizzes, and exams except the final are given via Blackboard. Please don’t wait until the last minute to take them. The quizzes and exams remain available on Blackboard for several days, and you get an email when a quiz /exam is available. If there is an issue, I tend to not reopen exams unless there is a sound reason for doing so. If you are not going to be able to take an exam please talk to me first.

Participation
You will be in a team of students actively doing research. You are expected to meet and participate with the group. If I hear complaints I will first meet with the students and counsel them about their reasons for lack of participation. Following that, if the situation does not improve, the student’s grade will be adversely affected. Research is a large part of this class. Please make sure you make best use of the time and resources you are provided.

K. COLLEGE AND UNIVERSITY POLICIES

- Academic Integrity (University)
  University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic
misconduct on an assignment or test will result in a failing grade.

- **Classroom/Professional Behavior**
  Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

- **Statement of Civility**
  Texas A&M University-Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

- **Deadline for Dropping a Course with a Grade of W (University)**
  The grade of W will be assigned to any student officially dropping a course. Please consult with the instructor before you decide to drop to be sure it is the best thing to do. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Should dropping the course be the best course of action, visit the Office of the University Registrar for the Course Drop Form that must submitted. No student is eligible to receive a W without completing the official drop process by this deadline. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/) for the last day to drop a course.

- **Grade Appeals (College of Science and Engineering)**
  As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage.
at [http://sci.tamucc.edu/students/GradeAppeal.html](http://sci.tamucc.edu/students/GradeAppeal.html). For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

- **Disability Services**
  The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116.

  If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.

  [http://disabilityservices.tamucc.edu/](http://disabilityservices.tamucc.edu/)

- **Statement of Academic Continuity**
  In the event of an unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi; this course would continue through the use of Blackboard and/or email. In addition, the syllabus and class activities may be modified to allow continuation of the course. Ideally, University facilities (i.e., emails, web sites, and Blackboard) will be operational within two days of the closing of the physical campus. However, students need to make certain that the course instructor has a primary and a secondary means of contacting each student.

L. **OTHER INFORMATION**

- **Academic Advising**
  The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

**GENERAL DISCLAIMER**

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.