Global Change and its Effects on Aquatic Ecosystems  
(MARB 6590.004/CMSS 6362)  
Department of Life Sciences  
Spring 2020

A. COURSE INFORMATION

Course number/section: MARB 6590.004/CMSS 6362
Class meeting time: TR 9:30-10:45 a.m.
Class location: CS-112
Course Website: Refer to Blackboard course website

B. INSTRUCTOR INFORMATION

Instructor: Dr. Michael Wetz
Office location: HRI 316
Office hours: TR 11:00 a.m.-1:30 p.m.; Please note that you are welcome to come by at any time during normal business hours, but scheduling an appointment by calling or emailing ahead of time will ensure that I will be available when you come by.
Telephone: 361-825-2132
e-mail: michael.wetz@tamucc.edu
Appointments: By email or personal communication

C. COURSE DESCRIPTION

Catalog Course Description
An introduction to the effects of climatic and anthropogenic change on terrestrial and aquatic structure and function. Includes readings from the current literature and discussion of controversial articles.

Extended Course Description
This course will introduce students to the effects of climatic and anthropogenic change on terrestrial and aquatic ecosystem structure and function. Course goals are to produce students capable of:

- recognizing and distinguishing ecological and biogeochemical patterns caused by natural climate variability versus manmade environmental change (e.g., nutrient loading, land use change and hydrologic modifications, climatic perturbations)
- confidently and effectively communicating with the general public on issues related to global change.

D. PREREQUISITES AND COREQUISITES

Prerequisites
None
E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

**Required Textbook(s)**
None. Lectures will cover material presented in the book and augmented by the instructor with material from the primary literature.

**Secondary Sources**

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

- Students will be able to analyze principles of marine ecosystem structure and function and effects of global environmental changes through interpretation of graphs and datasets.
- Students will be able to synthesize current issues pertaining to global environmental change as they relate to ecological processes.
- Students will develop and refine critical thinking skills and gain experience defining and defending their ideas through class discussions and critiques of controversial articles.
- Students will be endowed with ability to effectively communicate knowledge of global change to the general public.

G. INSTRUCTIONAL METHODS AND ACTIVITIES

Proposed topics will be covered in instructor-led lectures and class discussions of the primary literature.

H. MAJOR COURSE REQUIREMENTS AND GRADING

Grading will be based on participation in discussions, leading of discussions, performance on 3 exams and a final exam.

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Overall Grade Percentage</th>
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<tbody>
<tr>
<td>Participation in discussions</td>
<td>10%</td>
</tr>
<tr>
<td>Lead discussion</td>
<td>10%</td>
</tr>
<tr>
<td>Exams (x 3; 20% each)</td>
<td>60%</td>
</tr>
<tr>
<td>Final exam</td>
<td>20%</td>
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<tr>
<td>Total:</td>
<td>100%</td>
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<table>
<thead>
<tr>
<th>Class Average (X)</th>
<th>Grade</th>
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<tbody>
<tr>
<td>X ≥ 90.0%</td>
<td>A – Excellent</td>
</tr>
<tr>
<td>89.9% ≥ X &gt; 80.0%</td>
<td>B – Good</td>
</tr>
</tbody>
</table>
79.9% ≥ X > 70.0% C – Satisfactory
69.9% ≥ X > 60.0% D – Passing
X < 60.0% F – Failing

Discussions:
On certain days noted in the schedule, we will discuss either a classic or recent high publicity manuscript that pertains to the topic of the prior lecture. One student will lead each discussion. You should do your best to involve other students in the discussion... try to frame the discussion in terms of questions to the other students. Students who are not leading a discussion will also want to participate, as you are being graded on participation in the discussion. Students who are not leading are also required to bring in a related paper and be prepared to talk about it.

I. COURSE CONTENT/SCHEDULE
Tentative Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Introduction; ecology refresher</td>
</tr>
<tr>
<td>2,3</td>
<td>Marine science refresher</td>
</tr>
<tr>
<td>3-6</td>
<td>Earth’s climate system</td>
</tr>
<tr>
<td>7-10</td>
<td>Effects of anthropogenic climate change and natural climate variability</td>
</tr>
<tr>
<td>11-12</td>
<td>Eutrophication</td>
</tr>
<tr>
<td>13</td>
<td>Harmful algal blooms</td>
</tr>
<tr>
<td>14</td>
<td>Ocean deoxygenation/hypoxia</td>
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</tbody>
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Note: Changes in this course schedule may be necessary and will be announced to the class by the Instructor.

J. COURSE POLICIES

Attendance/Tardiness
Attendance is mandatory. Students are expected to attend all classes. Should you miss a lecture, it is YOUR responsibility to find out what you missed, get notes, learn about changes in the syllabus, etc. A missed grade will result in a score of ‘0’ for that assignment, with exceptions granted only in exceptional circumstances including illness (with doctor’s note), death in the family (with verification), university-sponsored event (with verification) or military deployment (with verification). Students with a university approved scheduled absence (athletics, military duty, etc.) MUST contact the lecture instructor well in advance of a scheduled absence.

Late Work and Make-up Exams
Late assignments will not be accepted unless accompanied by a letter from a professional verifying extenuating circumstances.
Cell Phone Use
Cell phone use is prohibited in class.

Laptop Use
Laptops may be used during regular class lectures as long as they do not distract other students. Laptops and other devices may not be used on exams unless otherwise noted by the instructor.

Missed Exam
Make-up exams will only be permitted if a doctor’s note or a note from another professional provides a valid reason for the student missing class on exam day.

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. 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/

**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.