A. COURSE INFORMATION

Course number/section: ESCI 3443
Class meeting time: Lecture: MWF 11:00am – 11:50am - IH 156
Class location: Lab (101): T 11:00am – 12:50pm - CI 214
Lab (102): R 11:00am – 12:50pm - CI 214
Course Website: https://bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

Instructor: Dr. John S. Wood
Office location: TBA
Office hours: MW 2:45 - 3:45 pm or by appointment
Telephone: (361) 548-2528
E-mail: john.wood@tamucc.edu
Appointments: Contact via email or phone to schedule an appointment. Additional hours available by appointment.

Teaching Assistant: TBD
E-mail: TBD

C. COURSE DESCRIPTION

Catalog Course Description
Historical, contemporary, and projected concerns of human activities on biological aspects of ecosystem functioning.

Extended Course Description
This course is described as the historical, contemporary and projected concerns of human activities on biological aspects of functioning ecosystems. 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
BIOL 1407 - Biology II or permission of instructor.
Co-requisites
SMTE 0096 Environmental Science Laboratory Safety Seminar (required every semester for lab-based courses. The Safety Seminar must be completed before the Census Date of the semester to participate in the lab portion of this course.)

E. **REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES**

**Required Textbook(s):**
*Essential Environment: The science behind the stories, 5th ed.*
Jay Withgott & Mathew Laposata
Lecture PowerPoints will be provided and materials will follow the textbook closely, but I do recommend that you purchase the text. There are textbook reading assignments, so you should not expect that 100% of the materials you will be tested on could be found in your notes. Many online quizzes will allow the use of the textbook. Students may decide to share textbooks to cut costs.

**Supplies**
Please bring laptop or tablet to class if you have one available. We will use them in lecture and lab.

F. **STUDENT LEARNING OUTCOMES AND ASSESSMENT**

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
4) Be competent to describe the interactions and impacts of humans on the environment
5) Design and perform a full environmental investigation and analysis

G. **INSTRUCTIONAL METHODS AND ACTIVITIES**

This course will use a variety of instructional methods including PowerPoint lecture presentations by the instructor, assigned readings, class discussions, and a substantial group project.
H. MAJOR COURSE REQUIREMENTS AND GRADING

The lecture and lab section will be treated as a single course.

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<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
<th>POINTS</th>
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<tbody>
<tr>
<td>Midterm</td>
<td>25%</td>
<td>250</td>
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<tr>
<td>Final</td>
<td>25%</td>
<td>250</td>
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<tr>
<td>Homework Quizzes</td>
<td>15%</td>
<td>150</td>
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<tr>
<td>Discussion Assignments</td>
<td>10%</td>
<td>100</td>
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<tr>
<td>Group Research Project</td>
<td>25%</td>
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**Midterm** - The midterm exam will be administered during a lab period, and is tentatively scheduled for March 8th. Expect a mixture of multiple choice, short answer, and essay questions. (250 points)

**Final** - The final exam will be administered during the final period on May 5th, from 11:00am-1:30pm. The exam will be comprehensive. Expect a mixture of multiple choice, short answer, and essay questions. (250 points)

**Homework Quizzes** - All quizzes will be administered on Blackboard. The quizzes will be available on Fridays following the end of the lecture class and will remain open until Wednesday prior to the beginning of the lecture class. Do not wait until the last minute to complete the quizzes! The quizzes are open for several days; therefore I will not reopen quizzes if they are missed. There will be 4 timed quizzes throughout the semester (4 x 20 points). I recommend studying prior to completing these quizzes because there will not be time to look up answers in your textbook. There will be approximately 7 other quizzes (labeled “Weekly Quiz” in the assignments list). These quizzes will allow unlimited time for completion. (7 x 10 points).

**Discussion Assignments** - The discussion assignment grades include participation in the discussions as well as any associated assignments that accompany the discussions. There will be at least three full days of lecture and one day of lab dedicated to discussions (4 x 25 points). Discussions will either have an assigned paper to read or an assigned topic that students will find their own peer-reviewed scientific paper to contribute. A one-page summary of your article will be written and submitted on Blackboard prior to the discussion (along with a PDF copy of your article). Details for each of the discussion assignments will be posted on blackboard in advance.

**Group Research Project** - The group project will involve original research projects conducted throughout the entire semester. Much of lab time will be used for project development, fieldwork/data collection, data analysis, and building a poster.

- **Project proposal**: (25 points) This will be assigned after the lab period in which the term projects are introduced and due before midnight on Friday, February 10th. Proposals should include background information from at least 5 quality sources (peer reviewed), your research question and hypothesis, proposed experimental design, and equipment needed. The project ideas will be reviewed to assess the feasibility of the projects with
the available resources, and feedback will be given during the “project planning day” lab period.

- **Scientific poster:** The group will work together to create a professional poster detailing their research and results (100 points). You should use PowerPoint to create your poster. One lab period will be dedicated to instruction on the use of PowerPoint for poster building. Posters should be 48”x36”. Sections that must be included are Introduction, Methods, Study Site, Results, and Discussion. I recommend that these sections be split between group members. Posters should be visually appealing. The results section should include a minimum of one figure appropriately displaying your results. Your group will present your poster at the Marine Science Graduate Student Organization Student Research Forum, which will be held in the Harte Research Institute on December 2, 2016 (25 points).

- **Presentations:** (75 points) To practice your public speaking and presentation preparation skills, groups will each be required to deliver a 15-minute presentation of the research that was conducted during the last few lecture periods. All members must actively participate in the presentation. The methods section of the presentation must include pictures of the fieldwork/lab work being conducted.

- **Documentation of Field Work:** (25 points) There will be opportunities to conduct fieldwork without supervision during the assigned lab periods (those allotted for project work). To provide evidence of full group involvement in data collection and an adequate amount of fieldwork conducted, time stamped pictures will be required.

I. **COURSE CONTENT/SCHEDULE**

The following is a tentative course schedule. Some topics may take more or less time to cover than anticipated. It is your responsibility to keep up with the changes to this outline. If assignment dates are ever changed, new due dates will be announced on Blackboard.

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<tr>
<th>WK</th>
<th>DATE</th>
<th>TOPIC</th>
<th>READING(S)</th>
<th>ASSIGNMENTS</th>
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| 1. | W, Jan 18 F, Jan 21 | **Lecture:** Introduction to Course  
**Lab:** NO LAB THIS WEEK | Tragedy of the Commons (on BB) | Tragedy of the Commons essay |
| 2. | M Jan 23 W, Jan 25 F, Jan 27 | **Lecture:** Tragedy of the Commons discussion, Science and Sustainability  
**Lab:** Discussion (Debate) | Ch 1 | Weekly quiz 1 |
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<tbody>
<tr>
<td>3</td>
<td>M, Jan 30</td>
<td>Lecture: Environmental Systems and Conservation Biology&lt;br&gt;Lab: Geospatial practice assignment</td>
<td>Ch 2, Ch 8</td>
<td>Weekly quiz 2</td>
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<td>W, Feb 1</td>
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<td>F, Feb 3</td>
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<td>4</td>
<td>M, Feb 6</td>
<td>Lecture: Evolution, Biodiversity, and Population Ecology&lt;br&gt;Lab: Introduction to Term Projects</td>
<td>Ch 3</td>
<td>Timed quiz 1</td>
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<td>T, Feb 8</td>
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<td>F, Feb 10</td>
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<td>Project Proposal</td>
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<td>5</td>
<td>M, Feb 13</td>
<td>Lecture: Economics, Policy, and Sustainable Development&lt;br&gt;Lab: Project planning day</td>
<td>Ch 5</td>
<td>Weekly quiz 3</td>
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<td>W, Feb 15</td>
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<td>6</td>
<td>M, Feb 20</td>
<td>Lecture: Discussion Day, Human Population&lt;br&gt;Lab: Project work</td>
<td>Ch 6</td>
<td>Weekly quiz 4</td>
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<td>W, Feb 22</td>
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<td>7</td>
<td>M, Feb 27</td>
<td>Lecture: Soil, Agriculture, and the Future of Food&lt;br&gt;Lab: Project work</td>
<td>Ch 7</td>
<td>NO quiz</td>
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<td>W, Mar 1</td>
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<td>8</td>
<td>M, Mar 6</td>
<td>Lecture: Freshwater, Oceans, and Coasts&lt;br&gt;Lab: Midterm Exam administered</td>
<td>Ch 12</td>
<td>Timed quiz 2</td>
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<td>W, Mar 8</td>
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<td>F, Mar 10</td>
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<td>9</td>
<td>MWF Mar 13-18</td>
<td>Spring Break – NO CLASSES!</td>
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<td>10</td>
<td>M, Mar 20t</td>
<td>Lecture: Oceans and Estuaries&lt;br&gt;Lab: Project work</td>
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<td>Weekly quiz 5</td>
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<td>W, Mar 22</td>
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<td>11</td>
<td>M, Mar 27</td>
<td>Lecture: Global Climate Change&lt;br&gt;Lab: Introduction to Excel statistics, project work/data analysis</td>
<td>Ch 14</td>
<td>Timed quiz 3</td>
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<td>W, Mar 29</td>
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| 12. M, Apr 3  W, Apr 5  F, Apr 7 | **Lecture:** Air Quality and Pollution Control  
**Lab:** Poster critique activity, Introduction to poster building in PowerPoint. | Ch 13      | Weekly quiz 6 |
| 13. M, Apr 10  W, Apr 12  F, Apr 14 | **Lecture:** Energy Resources  
**Lab:** Poster work | Ch 15, Ch16 | Weekly quiz 7 |
| 14. M, Apr 17  W, Apr 19  F, Apr 21 | **Lecture:** Discussion Day, Student Project Presentations  
**Lab:** Poster work |           | Timed quiz 4 |
| 15. M, Apr 24  W, Apr 26  F, Apr 28 | **Lecture:** Student project presentations  
**Lab:** Finalize Posters |           | NO quiz     |
| 16. May5th   | **Lab:** NO LAB THIS WEEK  
**Final Exam** Friday May5th, 11:00 am – 1:30 pm | -          | NO quiz     |

**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**
Attendance is required and makes up a substantial portion of your grade in this course. Any absence without a valid, **reported** excuse will result in the deduction of 2% of your total grade. Excessive tardiness may also result in deduction of attendance points at the discretion of the instructor.
Late Work and Make-up Exams

Late submissions of quizzes or assignments that accompany the discussions will NOT be accepted for a grade after the due date. The only assignments that will be accepted late are those relating to the research project. For every day that a certain portion of the assignment is late, there will be a 25% reduction in the possible score. An assignment that is 4+ days late will not receive credit. Please discuss extenuating circumstances, as leniency may be granted at the discretion of the instructor.

There will be NO make-up exams offered (with VERY FEW exceptions, and advance notice). Students with university approved scheduled absences (athletics, military duty, etc.) MUST contact the professor well in advance of the scheduled absence to make arrangements to take the exam early. In case of serious illness, injury, or emergency the student should provide documentation (note from the doctor) to prove the severity of the reason for their absence and work with the instructor to make up the exam.

Extra Credit
A limited amount of extra credit will be available.

Cell Phone Use
Cell phones should not be used during class. If there is an emergency and you must check your phone, please leave the room. Repeated distractions and lack of attention due to cell phone use may result in dismissal from the class period at the discretion of the instructor.

Laptop Use
Laptop use in class is encouraged for note taking and reference to the PowerPoint and articles being discussed. Laptop use should only be for the use of class materials, and laptop use that distracts the student from the class may result in a dismissal from the class period at the discretion of the instructor.

Food in Class
Food is allowed in class as long as it does not cause distraction to other students.

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 be 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.