Wetlands & Water Quality – ESCI 5490.005  
Department of Physical & Environmental Sciences  
Spring 2018

A. COURSE INFORMATION

<table>
<thead>
<tr>
<th>COURSE number/section:</th>
<th>ESCI 5490.005</th>
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<tbody>
<tr>
<td>Meeting time:</td>
<td>Monday/Wednesday 3:30 to 4:45</td>
</tr>
<tr>
<td>Location:</td>
<td>Center for Science, Room 103</td>
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B. INSTRUCTOR INFORMATION

<table>
<thead>
<tr>
<th>Instructor:</th>
<th>Dr. Jeremy L. Conkle</th>
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<tr>
<td>Office location:</td>
<td>103 Harte Research Institute</td>
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<tr>
<td>Office hours:</td>
<td>Monday &amp; Wednesday 1:00 to 3:30</td>
</tr>
<tr>
<td>Telephone:</td>
<td>361.825.2862</td>
</tr>
<tr>
<td>e-mail:</td>
<td><a href="mailto:jeremy.conkle@tamucc.edu">jeremy.conkle@tamucc.edu</a></td>
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<tr>
<td>Appointments:</td>
<td>Arrange via brief email, call or Schoology</td>
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C. COURSE DESCRIPTION

Catalog Course Description
Introduction to wetland ecosystems (natural, constructed and restored) with an emphasis on the role of wetlands in water quality. Topics include wetland systems, their history and role in society, relationships between biology, geology, ecology, hydrology and chemistry in wetland environments.

D. PREREQUISITES AND COREQUISITES

Ecology (BIOL 3428), Environmental Chemistry (CHEM/ESCI 4443) or Environmental Biology (BIOL/ESCI 3443)

E. LEARNING MANAGEMENT SYSTEM

Schoology: [https://www.schoology.com](https://www.schoology.com)  
Course Access Code: 45QCQ-P4TH5

Schoology is a learning management system (LMS) that is similar to Blackboard, but simplified and with a more modern user interface, making it easier to use. All course materials, including the syllabus, lectures, videos, assignments and grades are accessible through Schoology. All assignments must be submitted using Schoology (unless otherwise stated).

F. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook

Optional Textbook(s) or Other References
Teal and Teal Life and Death of a Salt Marsh.

G. 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.

Upon successful completion of this course, students will have a deep understanding of wetland environments globally and locally. Specifically, students will be able to:

1. Identify a wetland based on vegetation, hydrology and soils
2. Explain the ecosystem services provided by wetlands
3. Discuss the role of wetlands in our society
4. Discuss in detail, various chemical cycles in wetland systems
5. Explain threats to wetlands and why wetlands are vital to a healthy environment

H. INSTRUCTIONAL METHODS AND ACTIVITIES

This course will primarily consist of an interactive lecture, where the professor will present information through various media. Students, individually or as a group, will participate in lectures by answering questions verbally/on a tablet/on the whiteboard, discussing various topics with classmates and taking online quizzes and surveys using their smartphone, tablet and/or laptop in an effort to synthesize course materials in a way that that leads to a deeper understanding of wetland systems. Some portions of the class will be taught with a “flipped” model, where students must review materials (videos/quizzes/readings) from the book or online prior to class so that they are prepared for hands-on learning exercises during the
corresponding lecture period. There will also be field trips to Oso Bay to gain experience with sample/data collection, preparation and analysis. Homework assignments will be used to improve your understanding of wetland ecosystems as well as your writing skills and computational abilities. These activities are designed to improve students’ computational abilities, ability to critically analyze scientific research and write to a broad audience. Grading of these assignments will be partially performed by your classmates and all assignments will be discussed/reviewed in class.

I. MAJOR COURSE REQUIREMENTS AND GRADING

This class will have 2 semester exams and 1 comprehensive final that account for 65% of your overall grade. Homework makes up 15% of your grade and will consist of 2 short writing assignments designed to make you critically think and concisely write about a wetland topic and 3 wetland problem sets that allow you to use data to assess wetland properties and functions. The last 20% of your grade will be based on your research paper and its discussion.

**Graduate Student Projects:** Graduate students will research a wetlands topic of their choice, write a research article and discuss their results with the class. Students must meet with the professor during office hours before the end of the 3rd week to discuss a wetland topic for their research. You can choose almost any topic, so long as it pertains to wetlands and reasonably fits within the scope of the class. In your paper, you must clearly present a thesis and information to support or show why it is wrong. This can be done by synthesizing concepts from published research or by using data from your graduate research project. Additionally, you may find it beneficial to propose a paper that fits within or is loosely based on your graduate research to save time and improve your understanding of your research area. When you meet with me before the 3rd week of class we will discuss the expectations for this paper in greater detail.

Outlines for the proposed paper, with at least 10 references are due during Thursday’s class of week 6 and the completed draft is due the Thursday of week 10. Student presentations/discussions will be held during the last week of class. Formatting details will be given later in the semester.

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<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>20</td>
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<tr>
<td>Exam 2</td>
<td>20</td>
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<tr>
<td>Final Exam</td>
<td>25</td>
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<tr>
<td>Homework</td>
<td>15</td>
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<tr>
<td>Research Paper &amp; Discussion</td>
<td>20</td>
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*See section L for rubric information*
Grading for this course is based on the 10-point scale. The professor reserves the right to adjust this grading scale, however it would only shift in favor of the students.

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<th>LETTER</th>
<th>OVERALL COURSE SCORE</th>
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<tr>
<td>A</td>
<td>90-100</td>
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<tr>
<td>B</td>
<td>80-89</td>
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<tr>
<td>C</td>
<td>70-79</td>
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<tr>
<td>D</td>
<td>60-69</td>
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<tr>
<td>F</td>
<td>&lt;60</td>
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J. COURSE CONTENT/SCHEDULE
**K. COURSE POLICIES**

**Attendance/Tardiness**
All lectures and field trips are mandatory. University policy will determine the consequences for excessive absences.

**Make-up Exams & Late Work**
We will be going over homework in class the day it is due. Therefore, it will only be accepted with a valid Drs. note. Make-up exams also require a Drs. note and will be administered at 7:30 am in the professor’s office within 2 school days of the actual exam.

**Extra Credit**
No extra credit is planned for this course. However, this may change at the discretion of the professor and students will all have equal opportunity for points.

**Cell Phone Use**
NO. There is no tolerance for receiving, sending, talking or texting on a cell phone.

**Laptop/Tablet Use**
Only for note taking. I will require you to turn off WIFI if it becomes a distraction.

**Food in Class**
You may eat or drink so long as it does not become a distraction for other students. However, please refrain from consuming smelly foods. If you bring food that is particularly tasty, please consider bringing enough for everyone.

**Participation**
Participation will include, but is not limited to engaging in classroom discussion, problem solving, asking questions and most importantly not being disruptive. Participations will be particularly important on the 2 days when we will be reviewing journal articles (see Section I for dates).

**Conduct**
During class you may find that your ideas, opinions and past experiences conflict with others or what is presented during lecture. Please be respectful of these alternative views and help to ensure an engaging and courteous classroom atmosphere.

**L. GRADING RUBRICS**
Rubrics for certain assignments are posted with those assignments on Schoology. These rubrics should be used to guide your efforts on these assignments.

**M. 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.

**N. 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.

O. 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.