Oceanography (ESCI 3351.001)
Department of Physical and Environmental Sciences
Fall 2017

A. COURSE INFORMATION
   Course number/section: ESCI 3351.001
   Class meeting time: MW 2:00pm – 3:15pm
   Class location: CS 111
   Course Website: bb9.tamucc.edu

B. INSTRUCTOR INFORMATION
   Instructor: Ms. Melissa McCutcheon
   Office location: Mod. Bldg. 1, 101P
   Office hours: Mon and Wed 3:15am – 4:15pm, Thurs 3:00pm – 4:00pm
   Telephone: (814) 657-4780
   E-mail: melissa.mccutcheon@tamucc.edu
   Appointments: contact via email (NOT via bb message tool) to schedule an appointment

C. COURSE DESCRIPTION
   Catalog Course Description
   Methods and principles of oceanography. This is an upper-level science course designed for
   students in a variety of majors. Students are expected to be familiar with the scientific
   method, with earth science and biological science concepts, and to have an appreciation for
   the scientific approach to knowledge

   Extended Course Description
   This course investigates the broad-scale features and dynamics of the Earth’s oceans by
   exploring the four major disciplines of oceanography: marine chemistry, marine geology,
   marine biology, and physical oceanography. Students will learn that there is much overlap
   and interdependence between these disciplines. Specific topics include seafloor spreading,
   marine sediments, biogeochemical cycles, ocean structure, currents, waves, tides, primary
   production, marine ecology, and global warming. Students will also learn the importance of
   oceans in our daily lives, health, ecological services, and the economy.

D. PREREQUISITES AND COREQUISITES
   Prerequisites
   CHEM 1412 or ESCI 1401 or GEOL 1403.

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

Required Textbook(s)
Trujillo and Thurman, Essentials of Oceanography 12th Edition. Earlier editions may be used but it is up to the student to keep track of differences. Professor is not responsible for variations between textbooks.
ISBN: 9780134073545

Supplies
None. Students are encouraged to bring laptops to class.

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. Identify oceanographic processes that shape our earth system
2. Describe the global ocean’s role in biogeochemical processes
3. Evaluate the interaction between human activities and the ocean
4. Predict distribution of organisms based on physical and chemical hydrographic data
5. Assess media with respect to oceanography and ocean events

G. INSTRUCTIONAL METHODS AND ACTIVITIES

This course will be taught through traditional lectures with homework and assignments to emphasize the lecture material and exams to evaluate student learning. Additionally, a term paper will allow development of writing skills and a better understanding of a topic of interest.

H. MAJOR COURSE REQUIREMENTS AND GRADING

The student learning outcomes will be measured by student performance on exams and assignments, a research paper, and active participation in the class.
Homework, Quizzes, and Assignments- There will be 9 homework quizzes throughout the semester. Quiz format will vary from multiple-choice questions to short answer to problem sets. The quizzes will be due via blackboard immediately prior to the start of class on their due date. Each quiz will be worth 12 points. The lowest quiz grade for the semester will be dropped, for a total of 96 points. Two additional writing assignments that accompany class discussions will be worth 27 points each.

Exams- Exams will administered during class periods. They will include a variety of types of questions. The first 2 exams will be worth 150 points while the final cumulative exam will be worth 250 points.

Term Paper- The term paper will be due via BlackBoard electronic submission by 11:59 pm on Monday, November 20. The paper content will cover an in-depth investigation of a chosen oceanography topic (topic selection due by Monday, September 18). The paper should be between 1500 and 2000 words in length, 1.5 line spacing, 12 pt Times New Roman font, 1 inch margins, and include at least 1 figure, 1 table, and a works cited section properly citing a minimum of 5 peer reviewed journal articles. The paper will be worth 200 points and graded based on thoroughness and clarity.

Attendance and Participation- Active participation is essential to make the most out of this class. Participation includes asking questions, thoughtfully answering questions, making and replying to comments made during class discussions, etc. Attendance is required and unexcused absences will result in point deductions from students’ final grades.

I. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>DATE</th>
<th>TOPIC</th>
<th>READING(S)</th>
<th>ASSIGNMENTS</th>
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</thead>
<tbody>
<tr>
<td>M, Aug 28</td>
<td>Introduction to Course Introduction to Planet Earth</td>
<td>Ch 1</td>
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<tr>
<td>W, Aug 30</td>
<td>Plate Tectonics and the Ocean Floor</td>
<td>Ch 2</td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Chapter(s)</td>
<td>Notes</td>
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<tr>
<td>M, Sept 4</td>
<td>NO CLASS - LABOR DAY</td>
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<tr>
<td>W, Sept 6</td>
<td>Introduction to Course Introduction to Planet Earth</td>
<td>Ch 1</td>
<td></td>
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<tr>
<td>M, Sept 11</td>
<td>Plate Tectonics and Ocean Floor Characteristics</td>
<td>Ch 2 &amp; Ch 3</td>
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<tr>
<td>W, Sept 13</td>
<td>Marine Sediments</td>
<td>Ch 4</td>
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<tr>
<td>M, Sept 18</td>
<td>Water and Seawater</td>
<td>Ch 5</td>
<td>Quiz 1 due</td>
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<tr>
<td>W, Sept 20</td>
<td>Water and Seawater</td>
<td>Ch 5</td>
<td>Term Paper Topic Selection Due</td>
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<tr>
<td>M, Sept 25</td>
<td>Air-Sea Interaction</td>
<td>Ch 6</td>
<td>Quiz 2 due</td>
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<td>W, Sept 27</td>
<td>Ocean Circulation</td>
<td>Ch 7</td>
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<td>M, Oct 2</td>
<td>Ocean Circulation Mendeley introduction</td>
<td>Ch 7</td>
<td>Quiz 3 due</td>
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<tr>
<td>W, Oct 4</td>
<td>EXAM 1</td>
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<tr>
<td>M, Oct 9</td>
<td>Waves and Water Dynamics</td>
<td>Ch 8</td>
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<tr>
<td>W, Oct 11</td>
<td>Tides</td>
<td>Ch 9</td>
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<tr>
<td>M, Oct 16</td>
<td>Beaches, Shoreline Processes, and the Coastal Ocean</td>
<td>Ch 10</td>
<td>Quiz 4 due</td>
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<tr>
<td>W, Oct 18</td>
<td>Beaches, Shoreline Processes, and the Coastal Ocean</td>
<td>Ch 10</td>
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<tr>
<td>M, Oct 23</td>
<td>Marine Pollution</td>
<td>Ch 11</td>
<td>Quiz 5 due</td>
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<tr>
<td>W, Oct 25</td>
<td>Marine Pollution</td>
<td>Ch 11</td>
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<tr>
<td>M, Oct 30</td>
<td>Marine Life and the Marine Environment</td>
<td>Ch 12</td>
<td>Quiz 6 due</td>
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<tr>
<td>W, Nov 1</td>
<td>Marine Life and the Marine Environment</td>
<td>Ch 12</td>
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<tr>
<td>M, Nov 6</td>
<td>EXAM 2</td>
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<td>W, Nov 8</td>
<td>Term Paper Peer Review</td>
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<td>M, Nov 13</td>
<td>Biological Productivity and Energy Transfer</td>
<td>Ch 13</td>
<td>Quiz 7 due</td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Chapter</td>
<td>Notes</td>
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<tr>
<td>W, Nov 15</td>
<td>Biological Productivity and Energy Transfer</td>
<td>Ch 13</td>
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<tr>
<td>M, Nov 20</td>
<td>Animals of the Pelagic Environment</td>
<td>Ch 14</td>
<td>Quiz 8 due</td>
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<tr>
<td>W, Nov 22</td>
<td>NO CLASS- READING DAY</td>
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<tr>
<td>M, Nov 27</td>
<td>Animals of the Benthic Environment</td>
<td>Ch 15</td>
<td>Quiz 9 due</td>
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<tr>
<td>W, Nov 29</td>
<td>The Oceans and Climate Change</td>
<td>Ch 16</td>
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<tr>
<td>M, Dec 4</td>
<td>The Oceans and Climate Change</td>
<td>Ch 16</td>
<td>Quiz 10 due</td>
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<td>W, Dec 6</td>
<td>Review for Final Exam</td>
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<tr>
<td>M, Dec 11</td>
<td>FINAL EXAM</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
Attendance is required and makes up a portion of your grade in this course. Any absence without a valid excuse will result in the deduction of 1% of your total grade. School-related absences should be reported to the instructor with documentation PRIOR TO the absence. Other absences can be reported to the instructor and may or may not be considered an excused absence at the discretion of the instructor. Excessive tardiness may also result in deduction of attendance points at the discretion of the instructor.

Late Work and Make-up Exams
Electronically submitted work including quizzes and the term paper must be turned in by the instructed deadline to receive credit. Late submissions will be awarded a grade of 0%. There will be no makeup exams except for those students missing for school-related excused absences (or other absences deemed acceptable by the instructor). If you are going to miss an exam, the instructor should be notified AT LEAST 72 hours in advance, and you must schedule to take the test prior to the regular exam date.

Extra Credit
Extra credit opportunities may be offered to the entire class at the discretion of the instructor.
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 in class will result in a deduction of class participation points at the discretion of the instructor.

Laptop Use
Laptop use in class is encouraged for note taking and reference to the PowerPoint and articles that are 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 students being ask to leave and/or a deduction of class participation points at the discretion of the instructor.

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

Participation
Participation in classroom discussion and activities is essential to achieve the learning outcomes of this course and therefore will make up a substantial portion of the student’s grade. Every student is expected to contribute to all class discussions. Participation will be monitored by the instructor and participation grade deductions will be made accordingly.

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)**
  I hope that you never find it necessary to drop this or any other class. However, events can sometimes occur that make dropping a course necessary or wise. *Please consult with your academic advisor, the Financial Aid Office, and me, before you decide to drop this course.* Should dropping the course be the best course of action, you must initiate the process to drop the course by going to the Student Services Center and filling out a course drop form. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Please consult the Academic Calendar ([http://www.tamucc.edu/academics/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](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/

• **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.