A. COURSE INFORMATION

Course number/section: MARB 6590.011
Class meeting time: TR 12:30 – 1:45 PM
Class location: CS-103
Course Website: https://bb9.tamucc.edu

B. INSTRUCTOR INFORMATION

Instructor: Dr. Jeffrey Turner
Office location: Science Lab 1, Room 104
Office hours: TWR 2:00 – 5:00 PM
Telephone: 361-825-6206
e-mail: jeffrey.turner@tamucc.edu
Appointments: please email

C. COURSE DESCRIPTION

Oceans are increasingly recognized for their role in the health of the human population, both as a source of waterborne disease and a source of new bioactive (medicinal) agents. Indeed, healthy oceans are essential to the habitability of our planet – for humans and all other forms of life. Students will explore links between oceans, pollution, human well-being, ecosystem services, resource management, and the science and legislation governing the enforcement of water quality standards. This multidisciplinary subject will be addressed using a combination of lecture and discussion of primary literature.

D. PREREQUISITES AND COREQUISITES

Prerequisites
None. This course is intended for graduate students with a background in the biological sciences. It is ideally suited for graduate students in the MARB, CMSS, BIOL and ESCI MS and PhD programs.

Corequisites
None.

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

No textbook is required. Lectures and primary literature will be made available on Blackboard https://bb9.tamucc.edu prior to class. For further reading, I recommend Oceans and Human Health: Implications for Society and Well-Being (2014) edited by RE Bowen, MH Depledge, CP Calalane and LE Fleming from WILEY Blackwell.
Supplies

None.

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 links between the health of our oceans and the habitability of our planet.
2. Explore current themes central to oceans and human health (e.g. food provision, artisanal fishing, natural products, carbon storage, coastal protection, tourism & recreation, coastal livelihoods & economies, sense of place, clean waters, and biodiversity).
3. Understand the science and legislation governing water quality standards
4. Critically evaluate peer-reviewed literature and participate in open discussion
5. Propose and critique original research related to oceans and human health

G. INSTRUCTIONAL METHODS AND ACTIVITIES

Each week, topics will be covered in lecture on Day 1 followed by open discussion of primary literature on Day 2. Lectures and primary literature will be posted to Blackboard https://bb9.tamucc.edu at least one week prior to class. A short (1-page) executive summary of each reading assignment will be due on Day 2. Participation in weekly discussions will contribute significantly to your grade.

Students will be required to author a mock research proposal relevant to oceans and human health. The mock proposal should follow the most recent Texas Sea Grant (http://texasseagrant.org) request for research proposals (http://texasseagrant.org/funding/texas-sea-grant-call-for-proposals-2016-2018/). The mock proposal will consist of two parts: a pre-proposal due March 11th and a full proposal due May 6th. A detailed guideline for writing and structuring your proposal can be found by following the links above. The pre-proposal and full proposal will serve as your mid-term and final exams, respectively. Students are encouraged to work with their instructor or research advisor to select the proposal topic. Proposed research should “improve understanding, wise
use and stewardship of coastal and marine resources.” Students will be required to share a 15-minute PowerPoint version of their mock proposal (given on the last day of class, May 3rd). The presentation should include significant background information and detail how the proposed research meets criteria outlined in the Texas Sea Grant Strategic Plan (see link below).


H. MAJOR COURSE REQUIREMENTS AND GRADING

A 500-word summary/response paper is required for each peer-reviewed article and is due the day we discuss those articles. Participation in discussions is required and will be recorded every discussion day. Your pre-proposal will serve as your midterm while your full-proposal will serve as your final. Students are required to share their proposal in the form of a PowerPoint presentation the last week of class.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Written Summary of Papers</td>
<td>20</td>
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<tr>
<td>Participation in Discussions</td>
<td>20</td>
</tr>
<tr>
<td>Pre-Proposal</td>
<td>20</td>
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<tr>
<td>Full-Proposal</td>
<td>20</td>
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<tr>
<td>Student Presentation</td>
<td>20</td>
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<tr>
<td>Total</td>
<td>100</td>
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Grades will be based on the following:
A. 90.0% – 100.0% Excellent
B. 80.0% – 89.9% Good
C. 70.0% – 79.9% Satisfactory
D. 60.0% – 69.9% Passing
E. 0.0% – 59.9% Failing
I. **COURSE CONTENT/SCHEDULE**

General themes listed below are organized by week. Unless otherwise noted, topics will be covered in lecture on Day 1 followed by open discussion of primary literature on Day 2.

<table>
<thead>
<tr>
<th>Week 1.</th>
<th>Course Introduction</th>
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<tr>
<td>Week 2.</td>
<td>Accessing Human Health and Well-Being</td>
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<tr>
<td>Week 3.</td>
<td>Coastal Demography &amp; Ecosystem Services</td>
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<td>Week 4.</td>
<td>Oceans as Sinks for Waste Disposal</td>
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<td>Week 5:</td>
<td>Plastic Debris in Marine Environments</td>
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<td>Week 6.</td>
<td>Oil, Gas, Minerals and Energy</td>
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<td>Week 7.</td>
<td>Residual Pharmaceuticals and Antibiotic Resistance</td>
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<td>Week 8.</td>
<td>Natural Product Discovery in Marine Environments</td>
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<td>Week 9.</td>
<td>Spring Break</td>
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<td>Week 10.</td>
<td>Marine Models for Biomedical Research</td>
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<td>Week 11.</td>
<td>Infectious Microbes in Coastal Waters</td>
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<td>Week 12.</td>
<td>Governance of Coastal Water Quality</td>
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<td>Week 13.</td>
<td>Ocean Observing and Integrated Ecosystem Assessment</td>
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<td>Week 14.</td>
<td>Fisheries and Seafood Consumption</td>
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<td>Week 15.</td>
<td>Emerging Topics in Oceans and Human Health</td>
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<tr>
<td>Week 16.</td>
<td>Research Proposal Presentations</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 mandatory. Exceptions will be granted in the event of illness, death in the family, university sponsored event and military deployment. Other conflicts such as attendance of professional symposia or the need to conduct field research will be considered on a case-by-case basis. Students with a university approved scheduled absence (athletics, military duty, etc.) or other conflict must contact the instructor well in advance of the anticipated absence.

Late Work and Make-up Exams
In the event of an absence, it is the student’s responsibility to find out what you missed, get notes, learn about changes in the syllabus, etc. An unexcused absence will result in a 0 for that assignment.

Cell Phone Use
No allowed.

Laptop Use
Allowed for class-related purposes.

Food in Class
Please eat your lunch before or after class. However, I will not take food away from you.

Participation
Participation is required for discussion of peer-reviewed literature.

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/](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.

M. **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.