CMSS 6102
Department of Physical and Environmental Sciences
Fall 2015

A. COURSE INFORMATION

Course number/section: CMSS 6102
Class meeting time: Friday 2:00 pm – 2:50 pm
Class location: Bay Hall 202
Course Website:

B. INSTRUCTOR INFORMATION

Instructor: Darek Bogucki
Office location: HRI 118
Office hours: M =1:00 - 3:00 PM, W=1:00 - 3:00 PM
Telephone: 361-825-2836
e-mail: darek.bogucki@tamucc.edu
Appointments: Available by appointment via email

C. COURSE DESCRIPTION

Catalog Course Description
Advanced topic study and presentation by students, faculty, or visiting scientists. Meets one hour weekly.

Extended Course Description
A focus of this course is review professional behavior in the physical sciences, ethics, authorships, preparing proposals, public speaking, working with industry, etc.

Overview of philosophy. Why do we need ethics? What is ethics? Application to natural sciences to earth systems and geophysics. Professional development including research resources, ethical behavior in publishing, and interactions with peers. Communication skills including oral, written, and critical analysis.

D. PREREQUISITES AND COREQUISITES

Prerequisites: None
Corequisites: None

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)
No formal textbook requirement. Extensive reading will be required from journals, newspapers, magazines, and other library holdings.

Optional Textbook(s) or Other References
See Bibliography at the end of the Syllabus

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. Establish future leaders and professionals with an in-depth coastal marine system science education.
2. Educate future leaders and professionals with specialized skills by teaching methods of collecting, interpreting, analyzing and presenting scientific data orally and in various media formats.
3. Enable future leaders and professionals to contribute to a profession or field of scholarship.
4. Establish competency in application of scientific methods and the ability to conduct experiments.

Seminar Theme for Fall 2015:

Examine professional scientific ethics and what to do when ethical principles conflict in physical and environmental sciences.

G. INSTRUCTIONAL METHODS AND ACTIVITIES

Traditional lectures via board demonstrations and powerpoint presentations, classroom discussions, and student projects.

Two student projects are required:

1) Groups: a written summary and a presentation of a critical analysis of papers from the primary literature related to the seminar theme, and

You will be expected to investigate a topic by compiling the most current research and review journal articles concerning the issue. The majority of the material must be drawn from leading journals articles and the book ‘To Explain the World: The Discovery of Modern Science’ and journals: Science, Nature, Nature Geoscience, Proceedings of National Academy of Sciences, etc., and other top journals in a particular field but may use other media as a supplement. During class you will lead the discussion of the selected topic. You should begin with a concise, but complete, background review of the topic area and then discuss major issues including differing viewpoints.
Key articles should be provided to the entire course two weeks prior to topic discussion in order to facilitate interaction. Each student in the course will serve as a moderator and facilitator of discussion topics they presented.

**H. MAJOR COURSE REQUIREMENTS AND GRADING**

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Journal article reviews and class topic presentations</td>
<td>30</td>
</tr>
<tr>
<td>Project Proposal and Presentation</td>
<td>40</td>
</tr>
<tr>
<td>Class participation</td>
<td>30</td>
</tr>
</tbody>
</table>

<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 &lt; 80.0%</td>
<td>B – Good</td>
</tr>
<tr>
<td>79.9% ≤ X &lt; 70.0%</td>
<td>C - Satisfactory</td>
</tr>
<tr>
<td>69.9% ≤ X &lt; 60.0%</td>
<td>D - Passing</td>
</tr>
<tr>
<td>X &lt; 60.0%</td>
<td>F - Failing</td>
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</tbody>
</table>

**I. COURSE CONTENT/SCHEDULE**

<table>
<thead>
<tr>
<th>Week</th>
<th>Day</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Sept 4</td>
<td>Fri</td>
<td>Reading assignment: ‘To Explain the World’</td>
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<tr>
<td>Sept 11</td>
<td>Fr</td>
<td>Discussion</td>
</tr>
<tr>
<td>Sep 18</td>
<td>Fri</td>
<td>Ethics</td>
</tr>
<tr>
<td>Sep 25</td>
<td>Fri</td>
<td>Ethics</td>
</tr>
<tr>
<td>Oct 2</td>
<td>Fri</td>
<td>Readings</td>
</tr>
<tr>
<td>Oct 9</td>
<td>Fri</td>
<td>Readings</td>
</tr>
<tr>
<td>Oct 16</td>
<td>Fri</td>
<td>Readings</td>
</tr>
<tr>
<td>Oct 23</td>
<td>Fri</td>
<td>Readings</td>
</tr>
<tr>
<td>Oct 30</td>
<td>Fr</td>
<td>Readings</td>
</tr>
<tr>
<td>Nov 6</td>
<td>Fri</td>
<td>Proposals</td>
</tr>
</tbody>
</table>
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**

**Cell Phone Use**
Not allowed

**Food in Class**
Not allowed

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/](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.

**Bibliography:**

*The Nature of Science and Science Ethics*

   http://www.nap.edu/catalog/12192.html

2. “To Explain the World: The Discovery of Modern Science”— by Steven Weinberg (Amazon- $13)


**Research Issues**


7. APS Guidelines for Professional Conduct: http://www.aps.org/policy/statements/02_2.cfm


9. This is a collection of all the cases, case-related essays, and moral exemplars in the Online Ethics Center: http://www.onlineethics.org/Resources/Cases.aspx

10. AGU has established a set of guidelines for scientific integrity and professional ethics: http://ethics.agu.org/

**When there is Money involved: Working with Industry.**
