Marine Ecological Processes (BIOL 5436)
Syllabus - Fall 2009
Texas A&M University - Corpus Christi
Lecture: M/W 2:00 – 3:15 Lab: M 3:30 – 6:30

Instructor: Dr. Lee Smee
Email: lee.smee@tamucc.edu
Phone: x3637 or 825-3637
Office: S&T 315
Office Hours: M, W, F 11:00 AM – 12:00 PM

Please note that you are welcome to come by at any time, but scheduling an appointment (or calling or emailing ahead of time) will ensure that I will be available when you come by! Be sure to contact me with your new school email address.

Lab Coordinator: Judd Curtis
Email: judd.curtis@tamucc.edu
Phone: 825-2028 or x2028

Class Objectives/Description:
Advanced studies in structure and habitats of marine environments. Emphasis on factors influencing distribution of marine organisms, including field trips to areas along the Texas coast. Prerequisite: Principles of Ecology (BIOL 3428) or equivalent.

Student Learning Outcomes:
- Establish future leaders and professionals with an in-depth marine ecological education
- Educate future leaders and professionals with specialized skills by teaching methods of collecting, interpreting, analyzing and presenting scientific data orally and in a written format
- Enable future leaders and professionals to contribute to a profession or field of scholarship
- Establish competency in application of scientific methods and the ability to conduct experiments.

Major Areas of Study:
I. The Marine Environment and Ecosystem Function
II. Patterns in Marine Communities and Recruitment
III. Plankton, Oceanic Nekton, Marine Birds, and Marine Mammals
IV. Community Types (e.g., Estuaries, Salt Marshes, Tropical Communities)
V. Intertidal and Estuarine Ecology
VI. Marine Fisheries
VII. Conservation Issues and Natural Resource Management – The Human Dimension and Sustainability
Tentative Student Discussion Topics (will be decided upon during week 1):
1. Recruitment Dynamics of Open Marine Populations
2. Salt Marshes and their Decline in the Gulf of Mexico
3. Laguna Madre Marine Ecosystem
4. Top-down vs. Bottom up Control in Structuring Marine Communities
5. Marine Reserves
6. Tropical Marine Ecosystems
7. Others topics defined during class

WebCT (http://webct.tamucc.edu)
This website is your online course management system for BIOL/MARB 5436. It will include course notes, syllabus, and other information. If you have a working TAMU-CC Student Computer Account, use your current Islander ID ("first initial followed by your last name" e.g. “gstunz”); and your personal password (use “birthdate with 4-digit year”. Contact WebCt helpdesk at 361-825-2825 for log-in issues.

Texts (Optional):

- Extensive reading will be required from journals, newspapers, magazines, and other library holdings.

Laboratories:
Labs will be held for 2 hours immediately following lecture on Tuesdays. We will be doing various activities in lab including presentations, experiments, and local/regional field trips.

COURSE REQUIREMENTS AND GRADING CRITERIA:

Your grade will be calculated as a percentage of 400 available points:

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>2 Lecture Exams (100 pts ea)</td>
<td>200</td>
</tr>
<tr>
<td>Topic Presentation/Research Project</td>
<td>100</td>
</tr>
<tr>
<td>Participation (Lab and class discussions)</td>
<td>50</td>
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<tr>
<td>Microtheme</td>
<td>50</td>
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GRADING SCALE (%):

- 90.0 - 100.0 = A
- 80.0 - 89.9 = B
- 70.0 - 79.9 = C
- 60.0 - 69.9 = D
- 0.0 - 59.9 = F
Course Projects:
You can choose from one of two projects during the semester. Details for these projects will be discussed in class. These assignments are briefly described below.

1. Topic Presentation:
A major focus of this course will be a review of the current literature. Students will be assigned to address one of the discussion topics listed above. You are expected to thoroughly investigate the 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 (e.g., Science, Nature, Ecology, MEPS, JEMBE, Oecologia, Estuaries, 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. Ideally, the you will give a solid 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 compile material presented and discussed into a succinctly written 1-page topic report (“microtheme”) due one week after your discussion.

Student Information:
All students are expected to conform to college level standards of ethics, academic integrity, grammar, and spelling; review the appropriate pages of the TAMU-CC catalog and TAMU-CC student handbook. Failure to meet deadlines for course material or missed exams will result in a grade of “0” for that assignment/exam. Any student involved in providing false or misleading information, plagiarism, classroom misdemeanor, or academic dishonesty will be assigned an “0” for the work in question. In choosing to take this course, you are agreeing to abide by the course rules, regulations, and standards. Should you have concerns or questions, you are to discuss them with the instructor as soon as possible. However, you are bound by these rules, regulations and standards from the first day of class throughout the duration of the course.

Students With Disabilities Center (round building; x 5816). Should you need special consideration for exams and/or class activities (special microphones, additional time for exams, enlarged exams, etc.), please contact this center. The university will provide assistance as needed, but you must contact the center to make arrangements. The instructor cannot make modifications without the center’s involvement. Should you have mobility problems, please notify the lecture and lab instructor so that they may seek assistance for you in the case of fire drills or emergencies.