A. **COURSE INFORMATION**

- **Course number/section:** Biology 4590.003
- **Class meeting time:**
  - Lecture: M-F 8-11:50
  - Laboratory: M-F 1-4:50
- **Class location:**
  - Lecture: OCNR 222
  - Laboratories: CS 240
- **Course Website:** [https://bb9.tamucc.edu/](https://bb9.tamucc.edu/)

B. **INSTRUCTOR INFORMATION**

- **Instructor:** Mr. Lee R. Lehman
- **Office location:** CS 247
- **Office hours:** Wednesday, Thursday & Friday 5:00-6:45 pm
- **Telephone:** 803-348-5537
- **e-mail:** lee.lehman@tamucc.edu
- **Appointments:** Additional hours by appointment, please call or email.

C. **COURSE DESCRIPTION**

- **Catalog Course Description**

  The study of techniques required for proper marine science field studies. Elements studied include quantitative analysis of field data, evaluation of environmental factors effecting the survival and distribution of living organisms in the marine environment.

- **Extended Course Description**

  This is a two week field camp that includes a five day field research expedition at the Laguna Madre Field Station. Students will develop an understanding of the diversity of coastal habitats and learn the common flora, and fauna of the Texas Laguna Madre while participating in field research projects.

D. **PREREQUISITES AND COREQUISITES**

- **Prerequisites**
  - Permission of instructor.

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

Optional Textbook(s) or Other References


*Marine Science Field Camp Class and Laboratory Manual (Digital Version)*
Compiled by Roy L. Lehman. Includes supplemental readings as PDF’s. Offered as a free download by Dr. Lehman.


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. describe the ecological and environmental properties which effect the growth, physiology and distribution of marine organism in the Laguna Madre.

2. identify the common flora and fauna that is associated with the Laguna Madre and explain each group’s role in the overall community structure and function.

3. engage in field research activities: including collecting, evaluating data and reporting on results, both written and oral,

4. describe techniques of field sampling, the proper use of research equipment and display accurate field and laboratory note taking skills,

5. evaluate and describe human influences on coastal environments.

6. discuss and explain methods of management of marine systems.
G. INSTRUCTIONAL METHODS AND ACTIVITIES

The class will be primarily field and laboratory activities with support of knowledge based lecture in the classroom. A field project (completed at the Laguna Madre Field Station) with identification of plants will provide the student with the opportunity to practice and complete the activities used to evaluate plant distribution and abundance.

H. MAJOR COURSE REQUIREMENTS AND GRADING

FIELD/LABORATORY REQUIREMENTS

<table>
<thead>
<tr>
<th>REQUIREMENT</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Students will complete an introductory research project approved by the professor or engage in a current graduate research project being conducted in the Laguna Madre.</td>
<td></td>
</tr>
<tr>
<td>2. Students will be evaluated on the following field activities: The five day Field trip is <strong>REQUIRED</strong> and will occur May 16-20, 2016.</td>
<td></td>
</tr>
<tr>
<td>Field Journal (5/25/2016) ........................................................................</td>
<td>150</td>
</tr>
<tr>
<td>Field/Laboratory/Lecture Practical (5/26/2016) ......................................</td>
<td>150</td>
</tr>
<tr>
<td>Field Research Seminar (5/26/2016) ..........................................................</td>
<td>300</td>
</tr>
<tr>
<td><strong>TOTAL:</strong> ..................................................................................................</td>
<td>600</td>
</tr>
</tbody>
</table>

Grades Assigned as Follows:

A = 90% or greater
B = 80-89%
C = 70-79%
F = <70%

**FINAL EXAMINATION DATE:** May 26, 2016 (9-11)

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams</td>
<td>25</td>
</tr>
<tr>
<td>Homework</td>
<td>0</td>
</tr>
<tr>
<td>Presentations</td>
<td>50</td>
</tr>
<tr>
<td>Lab Reports</td>
<td>25</td>
</tr>
<tr>
<td>Lab Exams</td>
<td>0</td>
</tr>
</tbody>
</table>
I. COURSE CONTENT/SCHEDULE

A. INTRODUCTION  
1. Marine organisms of the Laguna Madre (Introduction)  
2. Overview of major habitat types found in the Laguna Madre  

B. ECOLOGICAL AND ENVIRONMENTAL PROPERTIES 
   OF THE LAGUNA MADRE  
1. Geological Factors and Descriptions  
2. Hydrological (Physical) Factors  
3. Chemical Factors  
4. Ecology and Geographic Distribution  
5. Research & Writing Skills (Introduction)  

C. STUDY OF GROUPS OF ORGANISMS  
   FIELD TRIP - 5 Days  
1. Plants of the Laguna Madre  
2. Plankton Populations of the Laguna Madre  
3. Estuarine Invertebrates of the Laguna Madre  
4. Estuarine Vertebrates of the Laguna Madre  
5. Birds associated with the Laguna Madre  

D. FOLLOW-UP FIELD CAMP RESEARCH  
   4 DAYS LEC. & LAB  
1. Research Skills  
2. Ecological Statistics  
3. Presentation Skills (power point)  
4. Writing Skills  
5. Final Exams & Seminar  

J. COURSE POLICIES  

Follow College and University Policies.  

K. COLLEGE AND UNIVERSITY POLICIES  

- Academic Integrity (University)  
  It is expected that university students will demonstrate a high level of maturity, self-direction, and ability to manage their own affairs. Students are viewed as individuals who possess the qualities of worth, dignity, and the capacity for self-direction in personal behavior.  
  See Full University Policy at
http://catalog.tamucc.edu/content.php?catoid=10&navoid=313#Academic_Integrity

- **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.

- **Deadline for Dropping a Course with a Grade of W (University)**
  There is no official date listed by the University for dropping a course with a grade of W during the Maymester semester.

- **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/

**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.