Biology 4590.002 Field Biology
Department of Life Sciences
Maymester 2017

A. COURSE INFORMATION

Course number/section: BIOL 4590.002
Class meeting time: MTWRF 9:00am-5:00pm
Class location: CS-108
Course Website: https://bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

Instructor: Drs. Lee Smee and Kirk Cammarata
Office location: CS 250, ENG 319
Office hours: TBA
Telephone: 361-825-3637 (Smee) or 361-825-2468 (Cammarata)
e-mail: lee.smee@tamucc.edu ; kirk.cammarata@tamucc.edu
Appointments: Due to the nature of this course, individual meetings with the instructor will be arranged as needed.

C. COURSE DESCRIPTION

Field Biology is a hands-on course designed to teach students key concepts by immersing them in nature. Topics include adaptations of plants and animals in different habitats, food web interactions, and how biotic and abiotic forces interact to structure natural communities including spatial and temporal variation in communities.

D. PREREQUISITES AND COREQUISITES

Prerequisites
Biology 3428 Principles of Ecology; Permission of Instructor

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Assigned readings will be from peer-reviewed literature and provided electronically by Dr. Smee. No textbooks are required.

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

- Students will learn how species adapt to different habitats and the biotic and abiotic conditions present in them through observation and reading
- Students will develop an understanding of the current status of ecological knowledge about the food webs in different habitats and design hypothetical experiments to further this knowledge
Students will demonstrate basic knowledge of the species present in aquatic and terrestrial habitats common to the US and be able to identify them using common names.

- Students will demonstrate how to use common methods and tools for studying field biology in aquatic and terrestrial systems.
- Students will measure biodiversity in multiple habitats using common methodology, analyze these findings, and create a report evaluating how biodiversity changes with abiotic conditions (e.g. moisture), climate, and human activity.

G. INSTRUCTIONAL METHODS AND ACTIVITIES

Hands-on, field based course. We camp, hike, and experience the course in a natural setting. Students will use point-center-quarter, transect, and plot measurements to estimate plant diversity in desert environments. Each day, students will spend ~2 hr making these measurements, and then comparing biodiversity as a function of abiotic conditions. Specific focus will be comparing different sampling methods, understanding appropriate experimental designs, understanding sampling limitations, understanding importance of scale (alpha, beta, gamma diversity), and differences between various calculations of diversity (e.g., Shannon vs. Simpson indices). Students will report their methodology, analysis and interpretations of the data on their final laboratory report due at the end of the course.

H. MAJOR COURSE REQUIREMENTS AND GRADING

ATTENDANCE

Attending is mandatory. All students are expected to attend all classes and field trips. Participation is part of the grade, and, due to the nature of the course, absences are not permitted and make-up work not allowed. Extraordinary circumstances will of course be considered.

GRADE COMPUTATION:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Final Comprehensive Exam</td>
<td>200</td>
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<tr>
<td>Field Journal</td>
<td>100</td>
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<tr>
<td>Summary Paper</td>
<td>150</td>
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<tr>
<td>Class Seminar</td>
<td>150</td>
</tr>
<tr>
<td>Lab Report</td>
<td>200</td>
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<tr>
<td>Participation</td>
<td>200</td>
</tr>
<tr>
<td>Total</td>
<td>1000</td>
</tr>
</tbody>
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GRADING SCALE: 90 % ≥ A  80 % ≥ B  70 % ≥ C  60 % ≥ D  59.9 % ≤ F
I. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
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<tbody>
<tr>
<td>5-08-16</td>
<td>Initial Meeting</td>
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<tr>
<td>5-11</td>
<td>Depart for Fort Davis State Park</td>
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<td>5-12</td>
<td>Balmorhea SP Swimming, Hiking, McDonald Observatory Star Party</td>
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<tr>
<td>5-13</td>
<td>Living Desert Zoo, Carlsbad, NM, Camp Washington</td>
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<tr>
<td>5-14</td>
<td>Hike Guadalupe Peak, Highest Point in Texas (8.5 miles)</td>
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<tr>
<td>5-15</td>
<td>Visit Carlsbad Caverns NP, drive to Cloudcroft, NM</td>
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<tr>
<td>5-16</td>
<td>White Sandys NP, Laundry Day</td>
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<tr>
<td>5-17</td>
<td>Rim Hike, Cloudcroft, NM; meadow wetland visit</td>
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<tr>
<td>5-18</td>
<td>Sierra Blanca Hike</td>
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<tr>
<td>5-19</td>
<td>Drive to Canyon, TX, Palo Dura Canyon SP</td>
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<tr>
<td>5-20</td>
<td>Hike Palo Dura Canyon SP</td>
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<tr>
<td>5-21</td>
<td>Hike Caprock Canyons SP</td>
</tr>
<tr>
<td>5-22</td>
<td>Hike Palo Dura Canyon SP</td>
</tr>
<tr>
<td>5-23</td>
<td>Garner SP</td>
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<tr>
<td>5-24</td>
<td>Return to TAMU-CC</td>
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<tr>
<td>5-25</td>
<td>Finish Projects</td>
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<tr>
<td>5-26</td>
<td>Final Exam; lab reports due; presentations due</td>
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</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

ACADEMIC INTEGRITY

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 comply with these rules will result in dismissal from the course.

ACADEMIC DISHONESTY (CHEATING)

Cheating in any form will absolutely not be tolerated. This includes asking for or providing help on an exam or paper, plagiarism, or basically doing anything that substitutes one person’s work for another’s. Cases of academic dishonesty will be dealt with severely. Students caught cheating will receive a grade of ‘F’ for the course and the offense will be reported to the student affairs office. All parties involved will receive a
failing grade for the course.

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/](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.

- **[Other important policies]**

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.

[delete and insert any additional notes, your expectations of the students, etc.]

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.