Ecology and Evolution of Fishes - BIOL 4590/5590
Department of Life Sciences
Spring 2015

A. COURSE INFORMATION

Course number/section: BIOL 4590.009/5590.009
Class meeting time: Lecture 12-1:15 MW, Lab 4:00-5:50 pm T
Class location: Lecture EN 104, Lab CS 235
Course Website: https://bb9.tamucc.edu

B. INSTRUCTOR INFORMATION

Instructor: Dr J Derek Hogan
Office location: HRI 102…
Office hours: 10:00-12:00 M
Telephone: 825-5883
e-mail: james.hogan@tamucc.edu
Appointments: Upon request when available

Instructor: Dr David S Portnoy
Office location: HRI 213D
Office hours: 1:30-3:30 M
Telephone: 825-2859
e-mail: david.portnoy@tamucc.edu
Appointments: Upon request when available

C. COURSE DESCRIPTION

Catalog Course Description
This course covers aspects of fish ecology from individual, population, community, and ecosystem levels. We will discuss the role of the environment on fish physiology and behavior, food-web dynamics, community assembly and diversity, ecosystem interactions, and anthropogenic impacts on fishes with a focus on conservation. 4 semester hours. (3:3)

D. PREREQUISITES AND COREQUISITES

Prerequisites
Ichthyology BIOL 4432 OR formal consent of instructor

Corequisites
None

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)
None

Optional Textbook(s) or Other References (strongly recommended).

Supplies
None

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

By the end of this course, students should be able to:
1. Understand individual, population, and community aspects of fish ecology.
2. Understand evolutionary forces that lead to trait divergence and speciation in fishes
3. Exhibit an understanding of how human populations affect fish populations and communities
4. Develop critical reading and review skills by discussing classic and current scientific papers
5. Exhibit scientific writing skills and the analysis and interpretation of data.

INSTRUCTIONAL METHODS AND ACTIVITIES

This course will be a combination of lecture section which will include traditional lecture, discussion, paper reading and in class demonstrations (through video). It will also include a laboratory section that will further enforce concepts from class using field trips and hands-on learning experiences.

G. MAJOR COURSE REQUIREMENTS AND GRADING

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>12%</td>
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<tr>
<td>Exam 2</td>
<td>12%</td>
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<tr>
<td>Exam 3</td>
<td>12%</td>
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<tr>
<td>Final Exam</td>
<td>12%</td>
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<tr>
<td>Class Presentation</td>
<td>10%</td>
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</tbody>
</table>
Discussion Participation 7%
Lab Attendance/Participation 10%
Field Assignments 10%
Lab Exercises 15%

H. COURSE CONTENT/SCHEDULE

[Delete and insert a list of topics (by day or week) including dates, reading assignments, homework problems, or other activities. Indicate exam dates, holidays, and any other important dates for students such as the last day to drop the class.]

<table>
<thead>
<tr>
<th>DATE (BY DAY OR WEEK)</th>
<th>TOPIC</th>
<th>Instructor</th>
<th>ASSIGNMENTS</th>
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<tbody>
<tr>
<td>1/22</td>
<td>Course Introduction</td>
<td>Dave/Derek</td>
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<tr>
<td>1/27</td>
<td>Biological Oceanography</td>
<td>Dave</td>
<td></td>
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<tr>
<td>1/29</td>
<td>Ecosystem Processes</td>
<td>Dave</td>
<td>TBA</td>
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<tr>
<td>2/3</td>
<td>Community Assembly</td>
<td>Derek</td>
<td>TBA</td>
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<tr>
<td>2/5</td>
<td>Populations</td>
<td>Derek</td>
<td>TBA</td>
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<tr>
<td>2/10</td>
<td>Migration</td>
<td>Derek</td>
<td>TBA</td>
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<tr>
<td>2/12</td>
<td>Dispersal</td>
<td>Derek</td>
<td>TBA</td>
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<tr>
<td>2/17</td>
<td>Early Life History</td>
<td>Dave</td>
<td>TBA</td>
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<tr>
<td>2/19</td>
<td>Fish as Predators</td>
<td>Dave</td>
<td>TBA</td>
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<tr>
<td>2/24</td>
<td>Fish as Prey</td>
<td>Dave</td>
<td>TBA</td>
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<tr>
<td>2/26</td>
<td>Student Led Paper Discussion</td>
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<tr>
<td>3/3</td>
<td>Midterm I</td>
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<td>3/5</td>
<td>Speciation I</td>
<td>Dave</td>
<td>TBA</td>
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<tr>
<td>3/10</td>
<td>Speciation II</td>
<td>Dave</td>
<td>TBA</td>
</tr>
<tr>
<td>3/12</td>
<td>Communication</td>
<td>Derek</td>
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<tr>
<td>3/17</td>
<td>Spring Break</td>
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<tr>
<td>3/19</td>
<td>Spring Break</td>
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<tr>
<td>3/24</td>
<td>Social Behavior</td>
<td>Derek</td>
<td>TBA</td>
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<tr>
<td>3/26</td>
<td>Breeding Systems</td>
<td>Derek</td>
<td>TBA</td>
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<td>3/31</td>
<td>Student Led Paper Discussion</td>
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<td>4/2</td>
<td>Midterm II</td>
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<td>4/7</td>
<td>Introduction to Human Impacts</td>
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<td>TBA</td>
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<td>4/9</td>
<td>Climate Change</td>
<td>Derek</td>
<td>TBA</td>
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I. COURSE POLICIES

Attendance/Tardiness
Attendance is not taken but participation is graded and students are tested on materials presented in class. Therefore, both tardiness and lack of attendance are likely to negatively impact grades.

Late Work and Make-up Exams
A note is required to excuse students from all graded in class work such as exams, paper discussions and field trips. Students will be given a chance to make-up the work but it must be done in a timely manner.

Extra Credit
Extra credit may be available as bonus question on exams at the instructors’ discretion.

Cell Phone Use
Please refrain from using cell phones in class, this include texting, tweeting, posting or any other such shenanigans

Laptop (Tablet) Use
Laptop use in class is permitted as long as the student is using it to facilitate the learning process. Appropriate uses include; taking notes, looking up materials during discussion and looking at relevant papers. Inappropriate uses include; checking email, looking at Facebook and playing Hello Kitty Island Adventure. If a student continually abuses the privilege of using a laptop in class they will be asked not to use it any more.

Food in Class
Eating in class is not prohibited unless it proves disruptive.
J. 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](http://catalog.tamucc.edu/content.php?catoid=10&navoid=313#Academic_Integrity)

- **Classroom/Professional Behavior**

- **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 by Friday, April 10, 2015. No student is eligible to receive a W without completing the official drop process by this deadline. Visit the Office of the University Registrar for the Course Drop Form that must be submitted. After April 10, 2015 a student will not be allowed 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**
  Disability Services (DS) is the hub for coordinating services and accommodations to ensure accessibility and utilization of all programs for all Texas A&M University-Corpus Christi students with disabilities. Our services are designed to meet the unique educational needs of enrolled students with documented permanent or temporary disabilities. DS provides intake and consultation services to students seeking to register with our office. DS reviews an individual’s documentation of
disability and assesses eligibility for services and the determination of reasonable accommodations. For more information visit the Disability Services Office at 116 Corpus Christi Hall or go to 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.