A. COURSE INFORMATION
Course number/section: BIOL 4411.001; BIOL 4411.101 (lab)
Class meeting time: Lecture – 8-9:15 TR; Lab – 9-11:50 F
Class location: Lecture – ECDC 219A; Lab – ECMS 114
Course website: Blackboard

B. INSTRUCTOR INFORMATION
Instructor: Kim Withers
Office location: NRC 3205
Office Hours: 10-12 MW (my office), TR 9:30-11 (location TBA)
Telephone: 825-5907
Email: Kim.Withers@tamucc.edu
Appointments: Call to set up an appointment outside of office hours

C. COURSE DESCRIPTION
Catalog Course Description
An understanding of why animals behave in the manner they do, through examination of both invertebrate and vertebrate species. Prerequisite BIOL 1407. SMTE 0091 is a co-requisite for this course. Documented completion of this safety training is required early in the semester for continued participation in this course. Safety training given during a laboratory meeting early in the semester is required for continued participation in the course.

Extended Course Description
In this course we will explore the proximate and ultimate causes of behavior, with a strong focus on experiential learning via case studies, discussion, and experimentation.

D. PREREQUISITES AND CO-REQUISITES
Prerequisites
BIOL 1407 Biology II

Corequisite
SMTE 0091 Biological Laboratory Safety Seminar

E. REQUIRED TEXTBOOKS, READINGS, & SUPPLIES
Required Textbooks
The second edition of the same book is an acceptable substitute.

Other Required References
Additional readings from the primary literature and other sources will be assigned throughout the semester.

Required Supplies
Lab Coat
Field and Lab Notebook: MUST be a Rite in the Rain, Level pattern, side-spiral, No. 313 http://www.riteintherain.com/side-spiral-level-4-5-8-x-7
Can be purchased at Amazon
F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

By the end of this course, students should:

1. UNDERSTAND the proximate and ultimate causes of animal behavior
2. BE ABLE TO define behaviors and collect meaningful behavioral data
3. DEMONSTRATE competence in analyzing and communicating behavioral data

G. INSTRUCTIONAL METHODS & ACTIVITIES

Lecture, readings with discussion, and case studies will be the bulk of the “lecture” portion of the course. For the lab, students will first be guided through structured behavioral observations and experiments that are designed to ensure that they understand how behavior is defined (operational definitions) and how observational and experimental data are collected and analyzed. In the second half of the lab, students will do independent experiments with supervision; experimental or observational set-up, IACUC considerations, behavioral definitions, data collection, analysis, and oral and written presentation of results.

H. MAJOR COURSE REQUIREMENTS & GRADING CRITERIA

<table>
<thead>
<tr>
<th>Element</th>
<th>Student Learning Outcome</th>
<th>Points (% of Grade)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Exams (2 [midterm, final] @ 100 pts each)</td>
<td>1, 2</td>
<td>200 (22.2)</td>
</tr>
<tr>
<td>Case Studies (8 @ 25 pts each)</td>
<td>1, 2</td>
<td>200 (22.2)</td>
</tr>
<tr>
<td>Lab Assignments (various) (2 @ 25 pts each)</td>
<td>1, 2</td>
<td>50 (11.1)</td>
</tr>
<tr>
<td>Lab Reports (7 @ 50 pts each)</td>
<td>2, 3</td>
<td>350 (27.8)</td>
</tr>
<tr>
<td>Research Report (1 @ 75 pts)</td>
<td>2, 3</td>
<td>100 (11.1)</td>
</tr>
<tr>
<td>Research Presentation (1 @ 25 pts)</td>
<td>2, 3</td>
<td>50 (5.5)</td>
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<tr>
<td>Total</td>
<td></td>
<td>900</td>
</tr>
</tbody>
</table>

Grades will be assigned as follows:
A = 90% or greater
B = 80-89%
C = 70-79%
D = 60-69%
F = <60%

I reserve the right to add or delete assignments at any time. If there are fewer or more assignments in a category (e.g., case studies, lab assignments) then the total points used to calculate your final grade will be adjusted to reflect the reduced or increased number of total points available.
# I. COURSE CONTENT/SCHEDULE (TENTATIVE)

I RESERVE THE RIGHT TO ALTER THE LECTURE OR LAB SCHEDULE AT ANY TIME

## LECTURE SCHEDULE

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture</th>
<th>Textbook Reading Assignment (3rd ed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Proximate &amp; Ultimate Causes of Behavior</td>
<td>Chapters 1 &amp; 2</td>
</tr>
<tr>
<td>2</td>
<td>Case Study¹: Australian Red-backed Spider Physiology of Behavior</td>
<td>Chapters 3 &amp; 4</td>
</tr>
<tr>
<td>3</td>
<td>Continue Case Study: Sexually Arrested Orangutans</td>
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<tr>
<td>4</td>
<td>Learning Case Study: Joe Joins the Circus</td>
<td>Chapter 5</td>
</tr>
<tr>
<td>5</td>
<td>Cultural Transmission Sexual Selection</td>
<td>Chapters 6 &amp; 7</td>
</tr>
<tr>
<td>6</td>
<td>Case Study: TBA Mating Systems</td>
<td>Chapter 8</td>
</tr>
<tr>
<td>7</td>
<td>Kinship Case Study: My brother’s keeper</td>
<td>Chapter 9</td>
</tr>
<tr>
<td>8</td>
<td>Catch up or Review Midterm Exam (Thursday)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Spring Break</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Cooperation Case Study: TBA</td>
<td>Chapter 10</td>
</tr>
<tr>
<td>11</td>
<td>Foraging, Antipredator behavior</td>
<td>Chapters 11 &amp; 12</td>
</tr>
<tr>
<td>12</td>
<td>Continue, Communication Last Day to Drop: Friday, 4/7, 5 pm</td>
<td>Chapter 13</td>
</tr>
<tr>
<td>13</td>
<td>Habitat selection, territoriality, migration</td>
<td>Chapter 14</td>
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<tr>
<td>14</td>
<td>Aggression Case Study: Game theory &amp; behavior</td>
<td>Chapter 15</td>
</tr>
<tr>
<td>15</td>
<td>Play and Personality</td>
<td>Chapters 16 &amp; 17</td>
</tr>
<tr>
<td>16</td>
<td>Grad student presentations</td>
<td>Graduate student papers due</td>
</tr>
<tr>
<td>Final Exam Day</td>
<td>Final exam</td>
<td></td>
</tr>
</tbody>
</table>

¹ Notes related to case studies and the associated readings and assignments:
- Additional reading for case studies will be assigned ~ 1 week prior to the case study.
- Due dates for assignments related to case studies will be announced the day of the case study, and will be ~ 1 week after the date of the case study.
- To get full credit for assignments associated with case studies, you must be in attendance on the day that the case study is presented in class. If you are absent, and depending on the type of assignment, no more than 20% of the total points will be given if the assignment is turned in on time. Not all case studies will have assignments, so if you are absent on that day you will get a zero.

**LAST DAY TO DROP IS FRIDAY 7 APRIL 2017 BEFORE 5 PM.**
## LAB SCHEDULE

<table>
<thead>
<tr>
<th>Week</th>
<th>Lab</th>
<th>What’s Due?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (FT)</td>
<td>Experiment 1: Learning to describe and quantify animal behavior (Ploger and Yasukawa 2003)</td>
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</tr>
<tr>
<td>2 (FT)</td>
<td>Learning to describe behavior, continued</td>
<td>Quiz</td>
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<tr>
<td>3</td>
<td>Behavioral Statistics</td>
<td>Lab Report: Experiment 1</td>
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<tr>
<td>4</td>
<td>Experiment 2: Developing operational definitions and measuring interobserver reliability using house crickets (Ploger &amp; Yasukawa 2003)</td>
<td>Statistics Homework</td>
</tr>
<tr>
<td>5</td>
<td>Experiment 3: TBA</td>
<td>Lab Report: Experiment 2</td>
</tr>
<tr>
<td>6</td>
<td>Experiment 4: TBA</td>
<td>Lab Report: Experiment 3</td>
</tr>
<tr>
<td>7</td>
<td>Experiment 5: TBA</td>
<td>Lab Report: Experiment 4</td>
</tr>
<tr>
<td>8</td>
<td>Experiment 6: TBA</td>
<td>Lab Report: Experiment 5</td>
</tr>
<tr>
<td></td>
<td>Choose partners and independent experiment topics</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Spring Break</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Experiment 7: TBA</td>
<td>Lab Report: Experiment 6</td>
</tr>
<tr>
<td>11</td>
<td>Workday to finalize set up and methods for independent experiments</td>
<td>Lab Report: Experiment 7 Independent Experiment Procedures outline for approval</td>
</tr>
<tr>
<td>12</td>
<td>Conduct independent experiments w/ supervision</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Finalize independent experiments and statistics</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Groups meet w/ Dr. Withers for feedback on research product drafts</td>
<td>Draft presentation and paper</td>
</tr>
<tr>
<td>15</td>
<td>Undergraduate Presentations</td>
<td>UG Papers due</td>
</tr>
</tbody>
</table>
J. COURSE POLICIES

Attendance/Tardiness
You are expected to attend every lecture and lab. Courtesy dictates that you will be on time for lecture. For case studies and associated discussion activities you will not get credit for the in-class portion if you do not attend class that day.

When we are working outside during lab, please arrive at the assembly point 5 to 10 minutes early. For activities on campus you may be able to catch up, but for field trips off campus YOU WILL BE LEFT BEHIND IF YOU ARE NOT ON TIME.

Late Work and Make-up Exams
Late work is not accepted.

For case studies and associated discussion activities you will not get credit for the in-class portion of the activity if you do not attend class that day.

Make-up lecture exams are only given in the case of extreme circumstances, such as hospitalization or death. Documentation of the circumstances through the appropriate on-campus division will be expected and arrangements must be made PRIOR to the exam for a make-up exam to be given.

There are NO make-ups given for lab exams

Extra Credit

There is NO such thing as “extra credit” in this class. In the words of Spongebob Squarepants and Mrs. Puff:

Spongebob: “Mrs. Puff, I don’t feel like I really did anything.”
Mrs. Puff: “That’s how extra credit is supposed to feel.”

For more about my attitude toward extra credit, see this article by Jack Slay Jr. http://chronicle.com/article/No-Extra-Credit-For-You/44956

Cell Phone Use

Please turn off and stow your cell phone when you come to class.

Laptop Use

I think you are generally better off to take notes by hand and transcribing them later. I will tolerate laptop use in class as long as you limit yourself to taking notes. If I see you are doing other things, like surfing the web, I will ask you to turn the laptop off.

Food in Class

Food or drinks are allowed in the lecture classroom, but cannot be taken into the lab. You should bring water with you on days that we are in the field.

Missed Exam

See “Late Work and Make-up Exam” policies above.
K. COLLEGE & 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

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 7, 2017. 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 7, 2017 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,
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.