Welcome to  
BIOL 425: Mammalogy  
Course Information and Syllabus  
UAF - Fall 2018  
3 Credits  

Meets  
Lecture: MW 1:00-2:00 pm Murie 107  
Labs: T 2:00 - 5:00 pm Murie 309*  
*Some labs in Irving 201  

Professor  
Cory Williams  
Email: ctwilliams@alaska.edu  
Phone: (907) 474-5965  
Office hours: MW 9 - 10 or by appointment in Murie 323C  

Teaching Assistant  
Matt Kynoch  
Email: mckynoch@alaska.edu  
Office Hours: W 2:30-3:30, R 2-3 (Murie 3rd Floor Common Area) or by appointment  

Prerequisites  
BIOL F115X; BIOL F116X; junior standing or above  

Text  
Mammalogy, Sixth Edition, by Vaughan, Ryan, & Czaplewski  
http://www.jblearning.com/catalog/9781284032093/  

Website  
The course website is administered through Blackboard at http://classes.alaska.edu. Check the website for announcements and to obtain copies of handouts and assignments. Grades will be posted on Blackboard.  

Description  
This course addresses aspects of the basic biology, taxonomy, ecology, evolution, biogeography, conservation, and physiology of mammals. Through completion of this course, you will have a larger understanding of the behavioral and physiological processes that allow mammals to function and survive in varied environments. This course meets the Biology and Wildlife department requirements that you demonstrate broad knowledge of organismal structure and function, evolution, biologically relevant pathways and transformations of energy and matter. The goal of this class is to provide good preparation for students interested in biology or wildlife related fields.
Instructional Methods

This course draws upon lecture, literature, simulation, and laboratory exercises to teach Mammalogy. Some in-class and laboratory group exercises will encourage problem solving and independent thinking. Lectures will be interactive and therefore attendance is mandatory – failure to attend lectures will impact your grade (see below). Several lab sessions will be devoted to discussions of primary literature and will include peer-to-peer learning. Additionally, peer-to-peer learning will also occur during lecture when student groups present material to the class.

Assessment

Lecture Quizzes 100 pts
Lecture Presentation #1 (MoA) 100 pts
Lecture Presentation #2 (BEEP) 100 pts
Midterm Exam 200 pts
Final (Cumulative) 250 pts
Lab 250 pts
Total 1000 pts

Grading

Grades will be assigned based on the percentage of points earned in class. Grades will not be assigned on a curve. No extra credit assignments are available.

<table>
<thead>
<tr>
<th>Grade</th>
<th>% of Total Points</th>
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<tbody>
<tr>
<td>A- to A+</td>
<td>90 – 100</td>
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<tr>
<td>B- to B+</td>
<td>80 – 89</td>
</tr>
<tr>
<td>C- to C+</td>
<td>70 – 79</td>
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<tr>
<td>D</td>
<td>60 – 69</td>
</tr>
<tr>
<td>F</td>
<td>0 – 59</td>
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Lectures

Class attendance is required for lectures. Lectures will provide material beyond what is covered in the textbook and will require in class participation. A significant portion of this class involves peer-to-peer learning. The lecture hour also provides an opportunity for announcements about upcoming labs.

Missing Lectures

During the course of the semester, there will be 13 lecture quizzes – only the top 10 (of 13) quiz scores a student receives will count towards their quiz grade. Make-up quizzes will only be available if a student can document legitimate reasons for missing more than 3 quizzes. Students will also sign up for group presentations and failure to show up for your presentation will result in a zero.

Lecture Presentations

During the course of the semester, each student will participate in 2 group lecture presentations. Groups will be composed of 4 students; group make-up must differ between presentation 1 & 2 (no repeat partners between presentation 1 to presentation 2). The selection of subjects and dates for presenting will be done on a first come/first served basis. After forming your group of 4, you can
then email the instructor your selection (subjects & dates taken will be shown in a form on blackboard online). For the first lecture presentation, the group will present on one order of mammals found in Alaska (i.e., Mammals of Alaska (MoA – options shown below)). For the second presentation, the group will select a subject area within any category of Behavior, Ecology, Evolution, and Physiology (BEEP) of mammals. The subject must be approved by the instructor and the group must select a subject before reserving a presentation date. Potential subject areas are shown below, but these are only examples. For both the MoA and the BEEP presentation, groups must email the instructor a complete PDF of the presentation at least 5 days before the lecture (each member of the group will lose 10pts per day they are late in providing the lecture). Groups are encouraged to meet with the instructor >1 week prior to giving their presentation. Failure to show up for your presentation will result in a zero grade.

**Missing Exams**
You must notify the instructor as soon as possible if you anticipate a conflict with an exam. If you are going to miss an exam due to illness, you must contact the instructor by email or phone before the exam begins (if at all possible) and provide documentation of a legitimate excuse (e.g., a note from a medical professional). Notification does not entitle the student to a make-up exam or a change in exam time, but does allow the instructor to consider a request for alternative arrangements.

**Labs**
The labs are designed to introduce you to the tools and techniques mammalogists use and to the taxonomic diversity of mammals found in Alaska. Many of the labs include outdoor activities and you must show up prepared for inclement weather! These labs will involve identifying mammals by their skins/skulls/tracks/etc. Additionally, any material learned on the ecology or physiology of mammals, or on techniques used in the study of mammals (e.g., radio telemetry) in the labs is fair game on Lab Final Exam. Additionally, all students will be involved in a semester-long project to investigate the behavior/occurrence of mammals using a camera-trap. Laboratory assessments include laboratory assignments/reports, lab exams, and participation in discussions. Points for participation in discussion sessions are based on the quality (not just quantity) of the discussion points you raise.

**Lab Grades**
250 points total (25% of grade): lab exam – 75 points; camera trap project paper – 75 points; gyrfalcon pellet write up – 50 points; discussion sections – 50 points (25 points each).

**Missing Labs**
Any planned absences must be coordinated with your TA prior to the start of lab. If you are unable to attend lab due to unforeseen reasons you must contact your TA immediately. Notification does not entitle the student to a make-up lab or a change in lab time, but does allow the TA to consider alternative arrangements. Missing a lab results in a 25 point penalty to your final grade. Missing the lab exam results in a zero on the lab exam (75 points lost).
**Academic Dishonesty**

Acts of academic dishonesty include cheating on exams, helping others to cheat, plagiarizing, feigning illness to obtain an extension, and turning in work that was written for another class without permission. Please read the UAF Code of Conduct in the UAF Catalog. Acts of academic dishonesty can result in the student receiving an F for the class and the case will be reported to the Dean of Student's Office for review. You are encouraged to work in groups on lab exercises, but unless otherwise specified, each of you must turn in your own written assignment.

**Disabilities**

Any student eligible for and needing reasonable accommodations due to a disability is requested to speak with me during the first two weeks of classes. Please contact UAF Disability Services (Phone: 474-5655, TTY x1827; email: uaf-disabilityservices@alaska.edu,) to provide documentation of your disability and to arrange for support services.

**IACUC**

The animal related activities in this course have been reviewed and approved by the Institutional Animal Care and Use Committee (IACUC) of University of Alaska Fairbanks (UAF). If you have any animal welfare concerns, please contact the IACUC at 907-474-7800.

The Lecture/Lab schedule for Fall 2018 is plastic and subject to change:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Reading</th>
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<tbody>
<tr>
<td>1</td>
<td>Aug 27 Welcome &amp; Introduction</td>
<td>Syllabus</td>
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<td>Aug 29 The Evolution of Mammals</td>
<td>Ch: 1-2</td>
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<td><strong>Week 1</strong> No Lab</td>
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<td>2</td>
<td>Sept 3 <strong>Labor Day – No Classes</strong></td>
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<td>Sept 5 Mammalian Characteristics: A brief intro</td>
<td>Ch: 3</td>
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<td><strong>Sept 4</strong> Lab 1: Paper Discussion – Camera Trapping</td>
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<td>3</td>
<td>Sept 10 Mammalian Characteristics</td>
<td>Ch: 4-6</td>
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<td>Sept 12 Monotremes &amp; Metatherians</td>
<td>Ch: 4-6</td>
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<td><strong>Sept 11</strong> Lab 2: Camera Trap Set-up</td>
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<td>4</td>
<td>Sept 17 Eutherian Mammals &amp; the Placenta</td>
<td>Ch: 7, 20</td>
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<td>Sept 19 Reproduction Cont.</td>
<td>Ch: 20</td>
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<td><strong>Sept 18</strong> Lab 3: Small Mammal Trapping</td>
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<td>5</td>
<td>Sept 24 The Evolution of Endothermy</td>
<td>Ch: 21</td>
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<td>Sept 26 Thermoregulation Cont.</td>
<td>Ch: 21</td>
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<td><strong>Sept 25</strong> Lab 4: Radio Telemetry Lab</td>
<td>G1a – Camera Trap Check</td>
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<td>6</td>
<td>Oct 1 Thermoregulation Final</td>
<td>Ch: 13</td>
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<td>Oct 3 G1b – MoA Rodentia</td>
<td>Ch: 13</td>
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<tr>
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<td><strong>Oct 2</strong> Lab 5: Radio Telemetry Lab</td>
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### MoA Categories for Presentation 1
- Rodentia (rodents)
- Chiroptera (bats)
- Carnivora (carnivorans)
- Artiodactyla (even-toed ungulates)
- Cetacea (whales, dolphins, & porpoises)
- Lagomorpha (hares & pikas)
- Eulipotyphla (shrews)

### Examples of BEEP Categories for Presentation 2
- Hunting/trapping effects on mammals
- Mammals & Climate Change
- Capital vs Income Breeding
- Cooperative Breeding
- Phylogenetics of …
- Biomechanics of …
- Mammals as Invasive Species
- Migration
- Plant-Mammal Interactions
- Artificial Selection in Mammals
- Biogeography of …