COURSE SYLLABUS

REWM 5830 – Wildlife Habitat Ecology
Spring Semester 2015

T 3:10 to 5:00 PM – AG 2018

Instructor Information:

Instructor: Jeffrey L. Beck
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Office: Ag 2005
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Office Hours: W 10:00 AM–2:00 PM and TH 11:00 AM–1:00 PM (or by appointment)

Prerequisites:

Graduate-level course in statistics and graduate standing or instructor consent.

Course Description:

Wildlife Habitat Ecology "For students in wildlife and rangeland ecology, emphasizing the relationships between wildlife populations and their habitats. Concepts forming the basis of wildlife habitat ecology including habitat and niche, habitat metrics, resource selection, habitat-relationships modeling, and habitat restoration and management." The course is designed as a readings course, where we will discuss relevant literature to broaden and refine our perspectives on concepts and current issues in wildlife habitat ecology. Consequently, students will be expected to prepare and present topical discussions to other class members. However, this year (2015), there will be a focus on resource selection, which will assist teams of students in preparing and presenting a resource selection study design for a species of their choosing.

Disability Statement:

If you have a physical, learning, sensory or psychological disability and require accommodations, please let me know as soon as possible. You will need to register with, and provide documentation of your disability to University Disability Support Services (UDSS) in SEO, room 109 Knight Hall.

Objectives/Outcomes/Standards:

Course Objectives

1. To gain an understanding of the central concepts and theory framing wildlife habitat ecology
2. To become familiar with quantitative approaches to estimating and modeling habitat selection, suitability, and wildlife–habitat relationships
3. To encourage an interest in further learning about wildlife habitat ecology

Student Responsibilities

1. Participate fully in all class discussions
2. Read assigned material before class and prepare insightful presentations

Classroom Policies

1. Students are expected to: be on time, read literature before class, and participate in discussions
2. Academic honesty and integrity are University Policies. Failure to maintain these standards may result in a failing grade and/or referral to the Dean of students
3. Derogatory language or behavior based on race, gender, religion, political affiliation, sexual orientation, or physical or mental abilities is not appropriate for class

Text(s) and Readings:

Required Textbook (available through University of Wyoming eBooks OR I will provide chapters as PDFs)

Morrison, M. L., B. G. Marcot, and R. W. Mannan. 2006. Wildlife-habitat relationships: concepts and applications. Third edition. Island Press, Washington, D.C., USA.

Additional Readings

A readings list consisting of journal articles, book chapters, and other sources will be generated as the semester progresses.

Course Requirements/Assignments:
Grading Standards

Grades will be assigned on the basis of percentage of total points earned.

A = >90%
B = 80–89%
C = 70–79%
D = 60–69%
F = <59 %

Assignments

Assignment	Number	Point Value	Total Points
Participation (semester)	--	75	75
Two-page literature handout	1	35	35
50-minute class discussion	1	40	40
Resource selection study design	1	100	100
Resource selection design presentation	1	25	25
Mid-term exam (take home)	1	125	125
Final exam (oral)	1	100	100
Total			500

Participation (15% of grade)

1. Each week, you will be responsible for reading the assigned papers and thinking insightfully about them. Your involvement in the class is essential, so please participate in weekly discussions. Also, each student will be given an opportunity to participate in teams for the mid-term exam as well as the resource selection study design
2. I will take attendance each week and consider that as part of the participation grade
3. I will provide an early participation grade to each student on March 3. The purpose of this grade is to provide you with a perspective on how your final participation grade would be if it were simply based on your participation during the first 4 class periods

Two-page Literature Handout and 50-minute Class Discussion (15% of grade)

Purpose and Background

Each student will develop a discussion to provide an opportunity to teach and better synthesize habitat ecology concepts. Specifically, you will lead the class through a 50-minute discussion of 1 topic relevant to wildlife habitat ecology and provide each of us with a 2- to 3-page handout that includes a brief summary of relevant literature sources. In conjunction with the other student who will present, your discussion includes a review/mini-lecture of theory, concepts, and relevant background literature, and leadership of a discussion on selected readings. I will develop a list of relevant papers for each week's discussion; however, to be flexible and to provide material to others in the class in a timely manner, we will decide on the paper you will present at least 1 week before your presentation

Protocol

1. The instructor and each student assigned to present will meet together at least 1 week before the presentation to identify papers and a presentation approach relevant to the selected topic. I will post PDFs of articles to read on the course website prior to the lecture (my goal is to have them posted by COB on the Friday before each lecture)

2. (35 points). Prepare a 2- to 3-page handout that summarizes your findings on the topic you have selected. On the bottom of the second or top of the third page provide 3 to 5 relevant references with a brief (few sentences) summary of each paper's main points. The format for student handouts is very flexible. I will provide some examples for you, which you may use as rough templates. For journal articles, one should at a minimum develop sections for Objectives, Methods, Results, Discussion, and Conclusions or Management Implications. You may also add anything else that will help guide your discussion including definitions, photos, introductory/explanatory information, and a summary of study areas.

3. (40 points). Goals for student presentations are to 1) provide a 10-15 minute overview of the topic, and 2) second, to review 1 or 2 articles in depth (i.e., each student will present 1 or 2 articles). Groups of 2 student presenters may find it beneficial for 1 student to provide the overview of the topic and review 1 article and the second student to review 2 shorter articles (e.g.., journal articles) or 1 longer article such as a book chapter. I will attempt to limit articles to no more than 3 per week. There is great flexibility in the manner in which you decide to present your topic, but consider PowerPoint or other format such as white-board discussion during the 50-minute time

period. Please provide a hardcopy of your 2- to 3-page handout with 3 to 5 references briefly summarized to each student and the instructor at the beginning of your presentation

4. Your presentation will be graded anonymously by 2 peers. I will ask you to provide a grade for your literature handout and will consider your grade as I evaluate your summary

Resource Selection Study Design and Presentation (25% of grade)

Purpose and Background

A key objective of this course is for each student to become familiar with how to design quantitative wildlife resource selection studies. Consequently, I have decided to provide you with an opportunity to develop a study design for a vertebrate species of your choosing and to present it to the class during the last week of the semester (May 5)

Protocol

1. Select 1 other student in the class to form a team. The grade for your study design and presentation will be the same for each team member
2. On Feb 17 I will provide instructions to the class on the study design
3. On May 5 you will turn in your final study design (100 points) and provide a 15-minute presentation (25 points) via PowerPoint to the class
4. I will provide an opportunity for each student to provide a grade for themselves and their partner

Mid-term Exam (25% of grade)

1. I will form teams of 2 class members to take the mid-term exam
2. I will provide a list of questions to each team on March 24 as well as how the exam is to be prepared and formatted (e.g., amount of time to compose exam, page length, etc.). Questions will require complete answers including references
3. Please bring 1 hardcopy of the exam from your team to the class on March 31. The grade from that exam will form the grade for both team members, but I will defer to any team member who indicates that the work was not shared equally

Final Exam (20% of grade)

1. I will hold a practice oral exam on April 28 so you can see what it is like to study and then take the oral final exam for REWM 5830
2. We will compile and then I will distribute potential exam questions by May 5
3. The final exam is scheduled for Thursday, May 14 from 3:30 to 5:30 PM in AG 2018

Late Assignments

Please turn in assignments on time. We will be depending on each other to provide weekly literature summaries and presentations. Written assignments (take home exam and resource selection study design) are due at the beginning of class on assigned due dates. Assignments will lose a half letter grade if submitted later that day, and will not be accepted more than 1 day past the due date. However, I will make accommodations for valid emergencies.

Attendance/Participation Policy:

1. Absences result in poor performance on assignments and exams, so please attend each class
2. University sponsored absences are cleared through the Office of Student Life
3. Other absences must be cleared through me

Academic Honesty:

The University of Wyoming is built upon a strong foundation of integrity, respect and trust. All members of the university community have a responsibility to be honest and the right to expect honesty from others. Any form of academic dishonesty is unacceptable to our community and will not be tolerated [from the UW General Bulletin]. Teachers and students should report suspected violations of standards of academic honesty to the instructor, department head, or dean. Other University regulations can be found at: http://uwadmnweb.uwyo.edu/legal/universityregulations.htm)

Course Outline:

Preliminary Schedule

Week	Topic	Assignment
1 (Jan 27)	Introductions and assignments	
2 (Feb 3)	*SRM Meeting – No Class*	
3 (Feb 10)	Habitat fundamentals (habitat and niche)	
4 (Feb 17)	Describing habitats (ESDs, habitat types, etc.)	Study Designs explained
5 (Feb 24)	Habitat selection terminology and designs	
6 (Mar 3)	GPS and VHF telemetry data and resource selection	
7 (Mar 10)	Defining habitat availability and use (home range, scales)	
8 (Mar 17)	*Spring Break – No Class*	
9 (Mar 24)	Quantifying resource selection	
10 (Mar 31)	Habitat quality and currencies of fitness	*Midterm Exam due*
11 (Apr 7)	Wildlife habitat–relationships modeling	
12 (Apr 14)	Habitat heterogeneity (edge, ecological traps, fragmentation)	
13 (Apr 21)	Public information from conspecifics and habitat selection	
14 (Apr 28)	Alteration of habitats (ecological damage and engineering)	Practice Oral Exam
15 (May 5)	Resource selection study design presentations	Design Presentations
16 (May 14)	*Final Exam – Thursday, May 14 (3:30–5:30 PM)*	*Final Exam*