

Conservation of Wildlife Populations – WILD 470

Fall Semester 2017

Instructors: Dr. Joshua Millspaugh
Stone 113
E-mail: Joshua.Millspaugh@umontana.edu

Dr. Colter Chitwood Forestry 318
E-mail: ChitwoodMC@missouri.edu

TA: Ally Keever
Natural Sciences 312
Email: allison.keever@umontana.edu

Office Hours: Millspaugh: M 10:00-10:50 or by appointment
Chitwood: M 2:00-2:50 or by appointment
Keever: Th 9:00-11:50 or by appointment

Class Hours: Lectures MWF 12:00-12:50 Liberal Arts 243
Lab Th 1:00-2:50 Stone 106

Other details: 4 credits

TENATIVE LECTURE SCHEDULE

September	1	Course introduction and context
Mon. 4		No classes (Labor Day)
	6	Exponential growth, continuous and discrete [Ch. 5]
	8	Exponential growth, continuous and discrete [Ch. 5]
Mon. 11		What is modeling?
	13	Stochasticity [Ch. 5]
	15	Density dependence, logistic growth [Ch. 7]
	Mon. 18	Density dependence, logistic growth [Ch. 7]
	20	Density dependence, stochasticity [Ch. 7]
	22	Survivorship schedule, life tables, doubling time
Mon. 25		Guest lecture (Millspaugh, Chitwood, and Keever at TWS)
	27	Guest lecture (Millspaugh, Chitwood, and Keever at TWS)
	29	Wrap up and review population growth

Memo 1 due

WILD 470 Fall 2017 Syllabus

October

- Mon. 2 Age-structured population models [Ch. 6]
4 Age-structured population models [Ch. 6]
6 Age-structured population models [Ch. 6]
- Mon. 9 **EXAM 1**
11 Stage-structured population models [Ch. 6]
13 Stage-structured population models [Ch. 6]
- Mon. 16 Estimating abundance [Ch. 4]
18 Estimating abundance [Ch. 4]
20 Survival and reproduction [Ch. 4]
Memo 2 due
- Mon. 23 Survival and reproduction [Ch. 4]
25 Small populations and PVA [Ch. 12]
27 Predation [Ch. 8]
- Mon. 30 Inbreeding and wild populations [Ch. 9]

November

- 1 Genetic variation and fitness [Ch. 9]
3 Connectivity/Metapopulations [Ch. 10]
- Mon. 6 Harvest management [Ch. 14]
8 Harvest management [Ch. 14]
10 No class (Veteran's Day)
- Mon. 13 Harvest management [Ch. 14]
Memo 3 due 15
Harvest management [Ch. 14], exam review
- 17 **EXAM 2**

THANKSGIVING BREAK (No class November 20)

- Mon. 27 Human perturbations on populations [Ch. 11]
29 Disease dynamics
- December 1 Focal species management [Ch. 13]
- Mon. 4 Models and conservation
6 Models and conservation
8 Models and conservation
- Mon. 11 Course review

FINAL EXAM: Tuesday, December 19, 2017 at 8:00-10:00

GRADING

Your grade will be based on the final exam, lab reports, two midterm exams, a term project, attendance/participation and memos. Specifically, here is how the points are distributed with due dates.

Grading	Total Points	Due Date
Final exam	150	Tuesday, December 19, 8:00 a.m.- 10:00 a.m.
Lab reports (8 @ 25 points each)	200	At the start of lab session (see schedule below)
Midterm exams (100 each)	200	Monday, October 9 and Friday, November 17
Term project	250	Due no later than Tuesday, December 19 at 8:00 a.m.
Attendance and Participation	50	Each day your group will provide a response to questions and your name must appear to receive credit for attendance that day.
Term Project Memos (3 @ 50 points each)	150	All due at the start of class. Due September 29; October 20; and November 13.
Total Points	1,000	

Here is how grades will be determined. Please note, this class is offered for traditional letter grade only, it is not offered under the credit/no credit option.

A: 93.5% or more
 A-: 90.0% – 93.4%
 B+: 87.0% – 89.9%
 B: 83.5% – 86.9%
 B-: 80.0% – 83.4%
 C+: 77.0% – 79.9%
 C: 73.5% – 76.9%
 C-: 70.0% – 73.4%
 D: 60.0% – 69.9%
 F: 59.9% or less

I will not review any assignments prior to their final submission. I will gladly discuss any assignment with you ahead of time, but it is not fair to others for a review prior to turning in an assignment. Do not ask the TA or me “is this answer correct” or “can you tell me whether this is the right answer” or any other variation on this theme – it is not fair to other students so don’t ask. If you wish to challenge how your answer to a question has been graded on any assignment or exam, you must do so within 1 week of receiving the graded assignment or exam and *in writing* explain why you feel your answer was correct.

LATE AND MISSED ASSIGNMENTS

All assignments are due at the start of the class period. For all assignments, there will be a 50% per day penalty for assignments turned in late. In other words, if an assignment is worth 50 points and you do not turn it in at the start of the class when it is due, you could only receive a maximum of 25 points if the assignment is submitted within 24 hours after the due date. Between 24-48 hours past due, you could receive up to 12.5 points and so on, under this scenario. If you have questions, ask me.

If you have a legitimate excuse for missing an assignment or turning one in late, notify me as soon as a problem occurs, not when you submit the assignment late. I will work with you if you have a legitimate excuse, but will apply the late assignment policy if you do not offer a legitimate excuse.

TERM PROJECT and MEMOS

See "Term Project" handout for all details pertaining to these assignments.

ATTENDANCE, CLASSROOM ETIQUETTE, AND LECTURE DISCUSSION GROUPS

Attendance is required. You are allowed one unexcused absence. If we determine that you miss 5 classes (including lecture and lab) without reason, the instructor will drop you from the class for lack of attendance. You will receive an email warning (sent to your university email account) when you reach 3 and 4 absences and when you reach 5 absences, you will be dismissed and receive a list of those dates you missed class. Be sure you understand this policy. If you have any questions about this policy, please see me. If you have a legitimate excuse for missing class, tell the instructor and provide evidence.

Similarly, you are expected to arrive on time for class before we begin. If you have another class that meets before our class, notify the instructor. You will be given one unexcused late arrival. After the unexcused late arrival, you will lose 10 points every time you are late.

There is a no laptop policy in lecture. If you have a legitimate reason why you need to use a laptop during our lecture meetings from 12-1 on MWF please see the instructor. Further, no use of iPods, cell phones, text messaging, surfing the internet, or other disruptive activities, such as twittering or tweetering and carrying out a conversation with the person sitting next to you, are allowed. These activities are disruptive to your fellow classmates and the instructor and will not be tolerated.

During lectures (starting on day 2), you will sit in designated teams of 3-5 people each. Periodically during lectures, I will pose a problem or ask a question which each team will discuss for ~5 minutes, before discussing with the class as a whole. Teams will be re-assigned during the semester. Your attendance and participation will be assessed by signing your name on the answer sheet your team will submit at the end of each class period.

ACADEMIC DISHONESTY

Academic honesty is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards academic dishonesty as an extremely serious matter, with serious consequences that range from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, or collaboration, consult with me. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the [Student Conduct Code](#).

All submitted assignments must be written up individually. Because of the nature of the models you will be using, no two labs should have the same exact figures or numbers or answers. Do not submit the same figures on lab assignments – that is plagiarism. Assignments that look similar or appear to be plagiarized from another student or another unreferenced source will be submitted to university administration for disciplinary action. If you have any questions about what constitutes plagiarism, again, contact me and I will be happy to discuss this issue with you.

UPPER DIVISION WRITING REQUIREMENTS

WILD 470 in conjunction with two additional upper division writing courses meets the university upper division writing requirement. WILD 470 specifically meeting the following outcomes:

- Identify and pursue more sophisticated questions for academic inquiry
- Find, evaluate, analyze, and synthesize information effectively from diverse sources
- Manage multiple perspectives as appropriate
- Recognize the purposes and needs of discipline-specific audiences and adopt the academic voice necessary for the chosen discipline
- Use multiple drafts, revision, and editing in conducting inquiry and preparing written work
- Follow the conventions of citation, documentation, and formal presentation appropriate to that discipline
- Develop competence in information technology and digital literacy

DROP DATES

Important Dates Restricting Opportunities to Drop a Course Autumn 2017:

Deadline	Description	Date
To 15 th instructional day	Students can drop classes on CyberBear with refund & no "W" on Transcript	Sept 21 = last day

Deadline	Description	Date
16 th to 45 th instructional day	A class drop requires a form with instructor and advisor signature, a \$10 fee from registrar's office, student will receive a 'W' on transcript, no refund.	Sept 22 through Nov 2
Beginning 46 th instructional day	Students are only allowed to drop a class under very limited and unusual circumstances. Not doing well in the class, deciding you are concerned about how the class grade might affect your GPA, deciding you did not want to take the class after all, and similar reasons are not among those limited and unusual circumstances. If you want to drop the class for these sorts of reasons, make sure you do so by the end of the 45 th instructional day of the semester. Requests to drop must be signed by the instructor, advisor, and Associate Dean (in that order) so if you pursue this request, leave sufficient time to schedule meetings with each of these individuals (generally this will take at least 3-5 working days). A \$10 fee applies if approved. Instructor must indicate whether the individual is Passing or Failing the class at the time of request.	Nov 3 – Dec 12

AMERICAN DISABILITIES ACT

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. If you have a disability that adversely affects your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommasson Center 154 or 406.243.2243. I will work with you and Disability Services to provide an appropriate modification.

TENTATIVE LAB SCHEDULE

Date	Topic
August 31	No lab
September 7	Geometric and Exponential Population Models (Lab 1)
September 14	Work on Term Projects
September 21	Logistic Population Models (Lab 2)
September 28	Work on Term Projects
October 5	Age-Structured Matrix Models (Lab 3)
October 12	Stage-Structured Matrix Models (Lab 4)
October 19	Estimating Abundance (Lab 5)
October 26	Work on Term Projects
November 2	Survival (Lab 6)
November 9	Work on Term Projects
November 16	Harvest Management (Lab 7)
November 30	Disease (Lab 8)
December 7	Work on Term Projects