

WL 411 & WL 411L – Principles of Wildlife Management (4 Credit Hours)
South Dakota State University
Department of Wildlife and Fisheries Sciences
FALL 2009

TIME/PLACE:	<u>Lecture</u>	<u>Labs</u>
	Agricultural Hall 100B	NPB, Rm. 181
	M W F 12:00 – 12:50 PM	T 1:00 – 2:50 PM (S01)
		T 4:00 – 5:50 PM (S02)
		TH 1:00 – 2:50 PM (S03)

STUDY SESSIONS: Mondays, 5:00 – 6:00 pm, SNP 102 (Only if students show up!)

INSTRUCTOR: Name: Dr. Susan P. Rupp
Office: NPB 139B
Office Hours: T/TH 10:00 – 12:00 (or by appointment)
Telephone: 605-688-4779
Email: D2L Course Email (answered within 24 hours)

CATALOG DESCRIPTION:

Application of ecological principles of the management of wild birds, mammals, and herps. History and development of wildlife management as a science; characteristics of, and factors affecting wildlife populations; techniques and theories of management; and, wildlife conservation.

PREREQUISITES: Ornithology (WL 363), Mammalogy (ZOOL 355)

COREQUISITE: Principles of Wildlife Management Laboratory (WL 411L)

ADDITIONAL SKILLS:

Students taking this course are assumed to have completed numerous basic biology/ecology coursework as well as multiple writing and speaking courses and will be expected to apply those concepts here. Review of previous material learned in those courses is advised. In addition, basic word processing, computer skills, statistics, and library research skills will be required.

INSTRUCTIONAL FORMAT:

The course will consist of 3 lectures and 1 two-hour lab period weekly. Lectures are in traditional lecture format with occasional invited speakers. Students are expected to participate in open and online discussions with questions and answers and may be called upon to contribute. Weekly reading assignments will be required and are to be completed prior to weekly discussion sessions (students will be quizzed/tested periodically on reading assignments).

Labs are informal and will cover basic field techniques and general concepts for monitoring and

measuring wildlife populations and their habitat. Occasional laboratory assignments and problem sets will be required. Students will be required to attend at least one field trip scheduled during lab periods. Extra credit will be given if students attend an additional trip and complete an additional assignment (see “Extra Credit” below). A field project, which includes a formal research proposal and final report, is required (see “Syllabus Supplement”). A few lecture/lab periods may be cancelled to allow time to work on research projects and consult with the instructor.

In addition to regular lectures/labs, an optional study session will be available to students Monday evenings from 5:00 – 6:00 pm in Room 102 of Northern Plain Biostress. During this time I will be available to answer questions about topics covered in lecture or lab. If there are no questions regarding lecture or lab materials, I am also happy to use the time to discuss other items of interest to the students (e.g., resume writing, job searches, professional development, etc.). I see this as an opportunity to allow upper-level students some extra time to focus on needs specific to them as they enter the work force. However, this is done willingly on my own personal time. Therefore, if no students show up by 5:10 pm, I reserve the right to leave!!! ☺

REQUIRED TEXTS:

Sinclair, A. R. E., J. M. Fryxell, and G. Caughley. 2006. Wildlife ecology, conservation, and management (2nd edition). Blackwell Scientific. 469 pp.

Braun, C. E., editor. 2005. Techniques for wildlife investigations and management (6th edition). The Wildlife Society, Bethesda, Maryland, USA. 974 pp.

Chamberlain, M. and C. Johnson. 2007. Journal of Wildlife Management guidelines. Online document: http://joomla.wildlife.org/documents/Manuscript_Guidelines_2008.pdf

SUPPLEMENTAL MATERIALS:

Various handouts and homework assignments are provided by the instructor. Additionally, internet resources will be used to supplement the course. Materials can be found on D2L under “Course Content.” Students will need access to Adobe Acrobat and MS Word in order to view some files. Students are urged to visit <http://ids.sdstate.edu/WebCT/StudentD2LGuides.cfm> as an introduction to using D2L, to review technical requirements, and to download appropriate software.

ATTENDANCE POLICY:

Attendance in lectures and labs is not mandatory but you will be held responsible for all course information (including material only covered in class) and will be graded on class participation, ***which includes points for lab attendance***. DO NOT COME TO ME FOR NOTES!!! You can get them from friends, but do not complain if they are not up to *your* standards. In addition, you can only receive point credits on specified quizzes, field trips or labs if in attendance. Many studies have indicated there is a direct correlation between attending class, grades received, and retention of material. Therefore, your attendance is highly encouraged. I especially encourage

you to be respectful and support guest speakers through active attendance and participation in those events.

ACADEMIC DISHONESTY:

Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. Cheating on tests or assignments should not occur at this class level. Cheating is defined in the Student Policies Manual Section 01:10:01. An academic dishonesty policy for the Department is provided to you. I do not tolerate cheaters; it is my opinion that nothing (especially a grade in a class) is worth throwing away your personal integrity over. Integrity is a trait that I look for when hiring people, and it is also a character trait I stress when I provide recommendations for students. Don't risk tarnishing your personal integrity.

The University has a policy on academic honesty, procedures for academic grade and dishonesty appeals, and sanctions for such activities (see Student Code & attached "Supplement to Syllabus"). The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or otherwise fails to meet the standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course. **Academic dishonesty includes, but is not limited to, dishonesty in quizzes, tests, or assignments; plagiarism; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.**

CHECK IT OUT (for Fun!): <http://www.lib.usm.edu/legacy/plag/plagiarismtutorial.php>

POLICY ON MISSED EXAMS/ASSIGNMENTS In addition to a midterm exam and lecture/lab finals, five random quizzes (10 points each) will be given over lecture and reading material. Make-up quizzes due to illness, conflicting schedules, or other unavoidable problems will be handled individually. Permission for missing an exam or quiz must be obtained before the exam/quiz and a legitimate excuse is required. Such permission can only be obtained in person with the instructor. E-mails are not allowed for such requests. The format of make-up quizzes and exams will be at the discretion of the instructor and may include oral and/or essay exams, written assignments, or brief class presentations.

COURSE GOALS/OBJECTIVES:

All lectures, labs, and assignments are designed to meet the overall objectives of this course, which are listed with Roman numerals below:

- I.** Gain a greater appreciation of fundamental principles, generalizations, and theories of wildlife management and ecology, with specific emphasis on populations, habitats, wildlife literature, and investigational techniques.
- II.** Learn how to analyze and critically evaluate ideas, arguments, and points of view related to theories and applications of population and habitat management techniques for key wildlife
- III.** Improve communication skills (through writing assignments and discussion), computer proficiency, teamwork skills, critical thinking/problem solving skills, and statistical skills

Each lecture, lab, and assignment will have a separate set of specific objectives which will tie back to one or more of the goals outlined above using the corresponding Roman numeral so students can tangibly note how each goal is met through corresponding objectives. Students are encouraged to structure their personal study time for tests/quizzes around these specific objectives.

EVALUATION PROCEDURES

Grading Scale:	90 - 100	=	A
	80 - 89	=	B
	70 - 79	=	C
	60 - 69	=	D
	< 60	=	F

Final Grade Calculation:

Your final grade will be calculated based on points earned from exams, quizzes, reports, and online participation. Total points earned divided by total possible points and converted to a percentage will result in a score between 0 - 100%. That percentage will be converted to a letter grade using the standard grade scale (see above). I may lower these limits if dictated by a lower distribution of student performance. However, you can be *assured* of receiving your desired grade by attaining these averages.

Point breakdown:

Assignment(s)	Points	Percentage
5 Quizzes (10 pts each)	50	7.4%
Lab Exam (DEC 9 th or DEC 11 th)	100	14.7%
Research project title, objectives, and hypotheses (DUE SEPT. 11 th)	10	1.5%
Research Proposal (DUE OCT. 9 th)	50	7.4%
Final Research Paper (DUE NOV. 26 th)	100	14.7%
Midterm Exam (OCT 10 th)	100	14.7%
Writing Assignments (Critical Thinking, n = 2)	40	5.8%
Lab Assignments	60	8.8%
Lab Attendance (see lab schedule)	50	7.4%
Field Trip	20	2.9%
Final Exam (Comprehensive – DEC 17 th)	100	14.7%
TOTAL POSSIBLE***	680	100%

*****EXTRA CREDIT**

During the course of the semester, you will have 4 options to earn extra credit. Two options will allow you to earn 10 points and one option is worth 25 points. You may only choose one of these three options:

10-point options:

1. Library Assignment
2. Extra Field Trip (Local Trip) with One-Page Write-up

25-point options:

3. Extra Field Trip (3 days, Custer State Park) with Two-Page Write-up
4. Additional IACUC training to include:
 - a. Online training (must present certificate)
 - b. Choice of **one** of the following depending on independent project:
 - i. Review and simple test of “Guidelines to the Use of Wild Birds in Research” document (The Ornithological Council 1997)
 - ii. Review and simple test of “Guidelines of the American Society of Mammalogists for the Use of Wild Mammals in research” document (Gannon et al. 2007).

These extra credit assignments are optional, but designed to broaden your experience.

ADA STATEMENT

This course acknowledges the importance of ADA requirements. Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Coordinator of Disability Services privately to discuss your specific needs. Please contact the Office of Disability Services at 605/688-4504 (Voice) or 605/688-4394 (TTD), or at the office in Binnewise Hall, Room 145 to coordinate reasonable accommodations for students with documented disabilities. For more information please see [SDSU's Office of Disability Services](#).

FREEDOM IN LEARNING (BOARD OF REGEANTS POLICY):

Students are responsible for learning the content of any course of study in which they are enrolled. Under Board of Regents and University policy, student academic performance shall be evaluated solely on an academic basis and students should be free to take reasoned exception to the data or views offered in any course of study. Students who believe that an academic evaluation is unrelated to academic standards but is related instead to judgment of their personal opinion or conduct should first contact the instructor of the course. If the student remains unsatisfied, the student may contact the department head and/or dean of the college which offers the class to initiate a review of the evaluation.

OTHER POLICIES:

Please avoid chewing tobacco in lecture, laboratory, or travel vehicles. State and University policies apply in regard to smoking. Please remember you are in mixed company on field trips and that your language should be reasonably clean. **AS A COURTESY TO YOUR INSTRUCTOR AND FELLOW STUDENTS, PLEASE TURN OFF YOUR CELL PHONES DURING CLASS/LAB!!!**

ASSIGNMENTS:

Reading and writing assignments are provided on the course outline. Except for the first day of classes, readings listed for a lecture period should be completed **before** class starts. In addition, there will be supplemental readings that correspond to topics covered, which I will post on D2L. These will primarily be from the scientific literature and will include “classic” papers in wildlife biology/ecology. The information discussed in those papers will be included on your quizzes/exams and some class discussion will revolve around those concepts. Two short (2-page) papers worth 20 points each will be required. Topics will be of my choosing and will require critical thinking and introspection. They will be graded on the thought put into them and clarity/grammar of writing - not on any “correct” answer. All written assignments must be typed and double-spaced using 12-point font and uploaded to D2L. Late papers **will not** be accepted, so plan accordingly. Short assignments may be attached to certain labs and/or field trips (see course and lab schedules). If you are unable to attend a field trip, please see the instructor prior to the scheduled trip and make alternative arrangements for a separate assignment so you do not lose any points.

RESEARCH PROJECT:

A field research project, which includes topic selection (10 points), a formal research proposal (50 points) and final report (100 points), will be required (see “Syllabus Supplement”). The project will involve selecting a topic, writing a proposal (including a review of literature), collecting the field data, analyzing the data, and writing up the final paper in *Journal of Wildlife Management* (JWM) format using the guidelines provided in the “Required Texts” listed above.

You can work alone or in teams of up to four people. A team can address the same topic/objective, develop methodology, and analyze the data together, but you **must write separate proposals and final papers.**

Research proposal topics, objectives, and any working hypotheses are due by 5:00 P.M. on **September 11th**. The actual research proposals are due by 5:00 P.M. on **October 9th**. Proposals will be docked 5 points/day for each day they are late (including weekend days). The final paper is due by 5:00 pm on **November 25th**. Final papers will be docked 10 points/day for each day they are late (weekends included). Please use a computer to type your manuscript. See “Syllabus Supplement” for point break down and details on how to write the research proposal and final report.

TOPICAL OUTLINE:

Topic 1	Introduction & Research Design	Topic 11	Fragmentation and Reserve Design
Topic 2	Population Ecology and Management	Topic 12	Wildlife Sustainability
Topic 3	Estimating Wildlife Numbers	Topic 13	T & E Species & Restoration
Topic 4	Popn. Growth, Yield, & Regulation	Topic 14	Wildlife Damage & Depredation
Topic 5	Predation and Predator Management	Topic 15	Habitat Management & Evaluation
Topic 6	Diseases and Parasites	Topic 16	Government Incentive Programs
Topic 7	Wildlife Harvest as a Management Tool	Topic 17	Adaptive Mgmt.: A case study
Topic 8	Wildlife Foods and Nutrition	Topic 18	Wildlife Economics
Topic 9	Wildlife Communities: Competition and Facilitation	Topic 19	Current Issues in Wildlife Mgmt. (1-2 topics selected by students)
Topic 10	Wildlife Movements & Distribution	Topic 20	Wildlife Mgmt. in the 21st Century

**PRINCIPLES OF WILDLIFE MANAGEMENT (WL 411) – COURSE OUTLINE
FALL 2009**

Week	Date	Topic, Assignments/Readings, and Due Dates
1	September 2	<p>Topic: Introduction to course; Research Project Overview; Definition/History of Wildlife Mgt.</p> <p>Assigned: Ch. 1 & 16 (SF&C); Romesburg (1981); MacNab (1983)</p> <p>Due: N/A</p>
	September 4	<p>Topic: Library Skills - Preparing for Field Projects; Research Project Overview</p> <p>Assigned: Library Skills Assignment (optional - 10 points); Platt (1964); Murphy and Noon (1991); Ch. 3 (Braun)</p> <p>Due:</p> <p>Guest: Nancy Marshall - University Librarian</p>
2	September 7	<p>Topic: LABOR DAY HOLIDAY - NO CLASSES!</p> <p>Assigned: Finish all Assigned Readings</p> <p>Due:</p>
	September 9	<p>Topic: Definition/History of Wildlife (cont); Experimental Management</p> <p>Assigned: Writing Assn. #1</p> <p>Discuss Romesburg (1981); MacNab (1983); Platt (1964); Murphy and Noon (1991)</p> <p>Due:</p>
	September 11	<p>Topic: Intro. To Population Ecology & Dynamics (Concepts/Definitions, Attributes)</p> <p>Assigned:</p> <p>Due: Field Research Topics Due (10 pts); Library Skills Extra Credit Due (10 pts)</p>
3	September 14	<p>Topic: Population Estimation (Methods); Discuss Witmer (2005)</p> <p>Assigned: Witmer (2005); Ch. 5 (Braun); Ch. 13 (SF&C)</p> <p>Due: Discuss assigned readings</p>
	September 16	<p>Topic: Population Ecology & Dynamics (Population Growth: Exponential and Logistic)</p> <p>Assigned: Ch. 6, pgs 78-84 & 88-90 (SF&C); pgs. 154-160 (Braun)</p> <p>Due:</p>
	September 18	<p>Topic: Population Growth: Exponential and Logistic (continued)</p> <p>Assigned: Finish Readings; McNab 1985</p> <p>Due: Writing Assn. #1 (20 pts)</p>
4	September 21-25 (Mon., Wed., Fri.)	<p>Topic: WILDLIFE SOCIETY MEETINGS (Monterey, CA) - NO CLASSES!!!</p> <p>Assigned: WORK ON PROJECTS!!!</p> <p>OPTIONAL: Trip to Custer State Park (Sept. 24 - 27) - Optional Extra Credit (25 pts)</p>
5	September 28	<p>Topic: Decimating Factors (Wildlife Harvest: Waterfowl)</p> <p>Assigned: Ch. 19 (SF&C); pgs. 669-675 (Braun)</p> <p>Due:</p> <p>Guest: Spencer Vaa, Senior Waterfowl Biologist (SDGFP)</p>
	September 30	<p>Topic: Population Ecology & Dynamics (Life Tables, Mortality/Survivorship Curves)</p> <p>Assigned: Ch. 6, pgs 84-88 (SF&C); pgs 160-173 (Braun)</p> <p>Due:</p>

Week	Date	Topic and Assignments/Readings (cont.)
	October 2	Topic: Population Ecology & Dynamics (Population Regulation) Assigned: Ch. 8 (SF&C); pgs. 173-181 (Braun) Due:
6	October 5	Topic: Decimating Factors (Wildlife Mortality) Assigned: Catch up on all readings! Due:
	October 7	Topic: Decimating Factors (Diseases and Parasites) Assigned: Ch. 11 (SF&C); Ch. 8 (Braun); Proposals Due Next Class! Due:
	October 9	Topic: The Role of IACUC in Animal Research Assigned: Elliott (1995) Due: Research Proposal (50 pts) Norm Braaten (Research Compliance Coordinator)/Michele Mucciante (SDSU Vet) Guest:
7	October 12	Topic: NATIVE AMERICAN DAY - NO CLASSES!!! Assigned: Due:
	October 14	Topic: Decimating Factors (Wildlife Harvest: Big Game) Assigned: Ch. 19 (SF&C); pgs. 658-661 & 675-683 (Braun) Due: Guest:
	October 16	Topic: Decimating Factors (Predation) Assigned: Ch. 10 (SF&C); Kaibab Deer (Suppl. Reading) Due: IACUC Extra Credit (25 pts) - Must present certificate of completion!; Field Trip Write-Ups (Optional Extra Credit - 10 or 25 points)
8	October 19	Topic: Decimating Factors (Predation - cont); Advocacy in Wildlife Assigned: Pulliam (1998); Brown (2006) Due:
	October 21	Topic: Assigned: Due: MIDTERM EXAM (100 pts)
	October 23	Topic: Welfare Factors (Habitat: Soils & Wildlife) Assigned: Ch. 4, pgs. 36-45 (SF&C); pgs. 465-478 (Braun); Writing Assn. #2 Due:
9	October 26	Topic: Welfare Factors (Habitat: Wildlife Foods & Nutrition) Assigned: Ch. 4, pgs. 46-58 (SF&C); Ch. 21 (Braun) Due:
	October 28	Topic: Welfare Factors (Habitat: Wildlife Foods & Nutrition - cont.)

Week	Date	Topic and Assignments/Readings (cont.)
	October 30	Assigned: Due: Topic: Competition and Facilitation Assigned: Ch. 9 (SF&C); pgs. 175-176 (Braun); Lotka-Volterra Exercise (optional) Due: Writing Assn. #2
10	November 2	Topic: Dispersal, Distribution, and Dispersion Assigned: Ch. 7 (SF&C) Due: Guest: Evan Phillips (Graduate Student)
	November 4	Topic: Wildlife Conservation: Metapopulation Ecology Assigned: Ch. 21 (SF&C); Readings on Island Biogeography (TBA) Due: Guest: Alisha Maves (Graduate Student)
	November 6	Topic: Wildlife Conservation: Viable Populations & Risk of Extinction Assigned: Ch. 17 (SF&C); Ch. 26, pgs. 691-703 (Braun) Due:
11	November 9	Topic: Wildlife Conservation: T & E Species and Management; Discuss Mills et al. (1996) Assigned: Ch. 26, pgs. 703-713 (Braun); Mills et al. (1996) Due:
	November 11	Topic: VETERAN'S DAY HOLIDAY - NO CLASSES!!! Assigned: Due:
	November 13	Topic: Wildlife Conservation: T & E Species and Management (cont.) Assigned: Schmidt (1990); Diamond (1992) Due: Guest:
12	November 16	Topic: Wildlife Management: Wildlife Damage & Depredation Issues Assigned: Ch. 20 (SF&C); Pgs. 730-771 (Braun) Due: Guest: Ron Schauer (SDGFP - Regional Manager, Sioux Falls)
	November 18	Topic: Introduction to Habitat Management; Video? Assigned: Van Horne (1983) Due: Discussion on Van Horne (1983)
	November 20	Topic: Habitat Management: Rangelands Assigned: Ch. 33, pgs. 873-876 & 881-891 (Braun) Due: Writing Assn. #4 (Ethics - 20 pts)
13	November 23	Topic: Habitat Management: Burning and Grazing Assigned: Ch. 33, pgs. 876-881 (Braun)

Week	Date	Topic and Assignments/Readings (cont.)
		Due:
	November 25	Topic: Habitat Management: Forested Ecosystems Assigned: Ch. 34 (Braun) Due: FINAL REPORTS ON RESEARCH PROJECTS DUE by 5:00 pm!!! (100 points)
	November 27	Topic: THANKSGIVING HOLIDAY - NO CLASS!!! Assigned: Due: Guest:
14	November 30	Topic: Habitat Management: Wetlands Assigned: Ch. 30 (Braun) Due: Guest: Rocco Morano (SDGFP - Habitat Biologist)
	December 2	Topic: Habitat Management: Agroecology/Agroforestry Assigned: Due: Guest:
	December 4	Topic: Active Adaptive Management: A case study (Elk in the Jemez) Assigned: Reading on "Seeking Common Ground"; Riley et al. (2002); Lancia et al. (1996) Due:
15	December 7	Topic: Federal Agricultural Programs and Conservation of Habitats Assigned: Ch. 32 (Braun); Supplemental Handouts Due: Guest: Matt Morlock, Pheasants Forever Farm Bill Biologist
	December 9	Topic: Wildlife Management in the 21 st Century: Current Issues Assigned: Reading TBA based on topic selected by class Due: Guest: TBD
	December 11	Topic: Continuation Of Current Issues Assigned: Due: Guest:
	December 17 (Thursday)	FINAL EXAM (2:00 PM – 3:40 PM)