Biology 3960 - Wildlife Biology
Fall Semester, 2017
CRN – 82093
Instructor - Dr. J. Mitchell Lockhart
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Phone: 333-5767 / 333-5759
Email: jmlockha@valdosta.edu
Office Hours: As posted or by appointment
Course hours: Lecture –Tuesday-Thursday, 11:00 – 12:15, BCB Room 2202
Lab – Monday, 11:00-1:50, BCB Room 2071
Textbook – *Wildlife of Southern Forests – Habitat and Management*, edited by James G. Dickson (**required**), *A Sand County Almanac* by Aldo Leopold (**required**), *Research and Management Techniques for Wildlife and Habitats* by Theodore Bookout (*suggested*).
Course Description: General principals and techniques in wildlife conservation, ecology, and management with an emphasis on life histories and taxonomy of game species of the southeastern U.S.
Attendance: **MANDATORY**! I do keep track of who is and isn't attending lecture and laboratory. This course has a considerable amount of new concepts and terminology and it serves your best interest to attend class regularly. Any student disrupting the classroom and affecting the learning experience of others will be asked to leave. Along these lines, **NO** cell-phones, beepers, and/or associated earpieces or headphones are allowed either in the **lecture room or laboratory**. If you bring them to class, they must be turned off (**not on vibrate**) and placed **out of view**. Students are not permitted to leave the lecture or laboratory rooms to receive messages during regular course time. My policy is not to give a warning, rather, if a cell-phone or beeper activates during lecture/laboratory or you attempt to view or send messages, **you will lose one LETTER GRADE from your final grade**. Viewing a cell-phone or pager that activates on "silent" mode during a quiz or exam will be treated as an instance of **CHEATING** and handled accordingly (**in addition to the above penalty**). Those wishing to utilize laptop computers as part of the class are required to sit in the first 2 rows of the classroom. Viewing any material other than class material will result in the same penalties above. University guidelines dictate that students missing 20% of lecture or laboratory sessions for this class are subject to receiving a grade of "F" regardless of their standing in the course.
Students With Documented Disabilities: Students requiring accommodations or modifications because of **documented** disabilities should discuss this need with Dr. Lockhart at the beginning of the semester. Students with disabilities who are experiencing barriers in this course may contact the Access Office for assistance in determining and implementing reasonable accommodations. The

Access Office is located in Farber Hall. The phone numbers are 229-245-2498 (V), 229-375-5871 (VP) and 229-219-1348 (TTY). For more information, please visit VSU's Access Office or email: access@valdosta.edu.
Grades: For the lecture grade, three exams (tentative) plus a comprehensive final will be given. Each exam will be worth 100 points. Questions will be based on material covered in lecture, in my notes, and from assigned readings. Exam questions will be in a variety of formats including (but not limited to) essay, short answer, multiple choice, fill in the blank, drawings, etc...Any questions concerning grading should be brought to the attention of the professor **NO LATER** than one week following return of the exam. **NO make-up exams will be given**.

For the laboratory grade, 3 lab practicals and other quizzes (tentative) will be given. The **Lab practicals cannot be made up. If a lab practical is missed, you will receive a zero for that lab grade.**

The final grade will be a combination of your final lecture exam scores and laboratory exam scores. Lecture exams will comprise 30% and lab exams/quizzes will comprise 25% of your final score. The Habitat Management Plan will be 15% and the wildlife sign collection will be 15% of the final grade. The lecture final will be comprehensive and worth 15% of the final grade.
Grade Scale: **90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, <60 = F**

Privacy Act: Because of the Buckley Amendment or Privacy Act, grades will not be discussed over the phone, via email, given to friends, or given to relatives.

Cheating: Refer to the Student Code of Ethics in the Valdosta State University Student Handbook. A student caught cheating will be penalized ranging from receiving a zero for that assignment or test to failing the class.

Important Dates: Midterm – October 5, Final Exam – Wednesday, December 6, 10:15 – 12:15

- **The Professor reserves the right to modify the above contents with proper notification.**

Tentative Lecture Schedule for BIOL 3960/5960 – Wildlife Biology

Unit 1 – Introduction and History of Wildlife Biology
Unit 2 – Sampling Wildlife
Unit 3 – Wildlife Habitat Management
Unit 4 – Population Attributes

Exam 1 (approximately Sept. 14)

Unit 5 – Wildlife Physiology and Nutrition
Unit 6 – Wildlife Harvest
Unit 7 – Wildlife Diseases
Unit 8 – Wildlife Mortality
Unit 9 – Predators

Exam 2 (approximately Oct. 24)

Unit 10 – Wildlife Damage Management
Unit 11 – Non-Consumptive Use of Wildlife
Unit 12 – Exotics
Unit 13 – Urban Wildlife
Unit 14 – Endangered Species

Exam 3 (approximately Nov. 30)

Tentative Laboratory Schedule – Note that this is a very "fluid" schedule and exercises may change based upon personnel availability and weather.

Week 1 – Introduction to class and lab, discussion of syllabus and introduction of identification of wildlife skulls and other "parts". Discussion of Habitat Management Plan and wildlife sign collection introduction.
Week 2 – Plowden Field Station
Week 3 – Lake Louise Field Station
Week 4 - Aging white-tailed deer. Identification of wildlife skulls and other "parts".
Week 5 – Aging white-tailed deer. Identification of wildlife skulls and other "parts".
Week 6 – Lab practical 1 – Wildlife Identification and Deer Aging
Week 7 – Field trip to Moody Air Force Base for demonstration of RFID and telemetry tracking techniques. Substitute – Telemetry and RFID demonstration.
Week 8-9 – Identification of waterfowl and waterfowl wing preparation.
Week 10 – Lab Practical 2 – Waterfowl Identification
Week 11 – United States Department of Agriculture – Georgia Wildlife Services demonstration on trapping and handling wildlife.
Week 12 – Reed Bingham State Park Gopher Tortoise Survey or scoring deer antlers
Week 13 – Measuring and "scoring" white-tailed deer antlers
Week 14 – Lab Practical 3 – Deer Antler Scoring
Week 15 – Completion of Habitat Management Plans and turn in Wildlife Sign Collection

MANAGEMENT PLAN OUTLINE FOR WILDLIFE BIOLOGY
Due LAST LECTURE DAY

Title:

Authors:

INTRODUCTION

This section states the purpose of your report, and lists the goals which you hope to accomplish. You should clearly state which specie or species you are managing for, and why you are managing for this specie(s). You should justify management for the species you select on biological, economic, and political grounds. That is, is it economically and politically feasible to manage for the species in question? Will some special interest group become upset? How will you convince this special interest group of the biological value of your species? Do you have enough money in your budget to carry out your management plan?

LITERATURE REVIEW OF SPECIES LIFE HISTORY

In this section you will present pertinent information regarding the life history of your species (behavior, ecological relationships, nutritional requirements, etc), using references at the library or from other sources. Concentrate your discussion on the factors (decimating and/or welfare) that tend to limit population size for your species, so that you can justify actions recommended in your "Schedule of Management Activities" section (described below).

Throughout the body of your paper (but especially in the Literature Review section) you will be citing references to other scientific articles and books. You must cite a minimum of **10 references from the scientific literature** (the online database of articles from the Journal of Wildlife Management is an excellent source of information for this, plus other online databases), There should be as many links as possible to relevant web sites). NO WIKIPEDIA references are allowed.

LITERATURE REVIEW OF MANAGEMENT TECHNIQUES

In addition to the above review of life history, a separate section in your management plan will review management techniques for your target species. Do not discuss historical issues, just the types of management techniques that have been used for your target species. In addition to library references, you can use information from lecture, textbooks, and the Internet for the literature review sections of your report.

DESCRIPTION OF THE MANAGEMENT AREA

The fourth section of your management plan should have this heading. It will include one or more maps along with a written description of the study site (including the surrounding land) as it now exists. **It is strongly recommended that you take color photographs of your area.** You should indicate the size of the site in hectares (use the metric system throughout the paper). This map and other maps in the report should be labeled "Figure 1", "Figure 2", etc. so that you can refer to them in the body of the text. Look at a current volume of the Journal of Wildlife Management to see the proper method for labeling tables and figures. Make sure you include a fairly detailed description of existing vegetation, soil types, and topography (more than one map will probably be required). Soil types can be found in government soil survey books which are available for every county in the U.S.

STEPS OF THE MANAGEMENT PLAN

The preceding section indicated what the current situation is at Plowden Field Station. The purpose of this section is to describe and JUSTIFY the specific activities which you will use to modify the management area. You can use a monthly or yearly schedule depending upon the species of interest. **Outline the steps** that you will take to modify the habitat, and provide a **justification** for each step in your outline that refers back to the Literature Review of Management Techniques. Your written narrative should refer the reader to a series of maps (figures) showing the appearance of the area after each major phase of your habitat manipulation process. See the sample management plans for examples.

BUDGET

For each activity in your schedule; give the estimated cost of this activity. These estimates do not have to be extremely accurate, but I want you to have some idea what your management plan will cost not only in dollars but also in the number of person-hours of labor. Assume a maximum of $10,000. Estimate the size of the work crew necessary to carry out each aspect of the plan, and the equipment they will need. If you plan to do any burning, remember that you will need experienced work crew and safety equipment. At the end of this section, estimate the total cost of your management plan per unit time. For example, how much would it cost if it continued for 5 years? Ten years? (Remember, these estimates do not have to be very accurate. However, many well intentioned management plans have foundered for lack of money. DNR budgets are usually not large!) How often will your proscribed plan have to be repeated in the future? Any time that you set back plant succession, the plants will grow again, and this must be taken into consideration when formulating future plans.

SUMMARY AND CONCLUSION

This section should tie the rest of the paper together by discussing the potential impact of your management plan on your target species. **In addition, make some rough predictions concerning population sizes in the years to come** as a result of your activity.

LITERATURE CITED

This section will list references cited in your report alphabetically by the author's last name. For example:

Owen, M. 1975. Cutting and fertilizing grassland for winter goose management. Journal of Wildlife Management 39:163-167.

(Note that the year of publication is followed by the title, journal name, volume number and pages.)

Course Outcomes/Assessments

1. Know the history of wildlife biology in the United States.
2. Know the natural history of the principal game species of the southeastern United States.
3. Know how to assess habitat for particular game species and how to prepare a habitat management plan with budget.
4. Recognize and identify wildlife sign in the environment.
5. Know how to assess populations and recognize their health status.
6. Know how various factors, such as harvest, disease, and predators may affect wildlife populations.
7. Be familiar with special wildlife biology topics, such as exotics, urban wildlife, and endangered species.

Assessments for this course will include reading of scientific literature, preparation of a written wildlife habitat management plan, a collection of wildlife sign, written exams, and laboratory practical exams.

General Education Outcomes/Assessments

This course will help students achieve four of the general education outcomes for Valdosta State University:

3. Students will use computer and information technology when appropriate. They will demonstrate knowledge of computer concepts and terminology. They will possess basic working knowledge of a computer operating system. They will be able to use at least two software tools, such as word processors, spreadsheets, database management systems, or statistical packages. They will be able to find information using computer searching tools.

4. Students will express themselves clearly, logically. and precisely in writing and in speaking, and they will demonstrate competence in reading and listening. They will display the ability to write coherently in standard English; to speak well; to read, to understand, and to interpret the content of written materials in various disciplines; and to listen effectively and to understand different modes of communication.

5. Students will demonstrate knowledge of scientific and mathematical principles and proficiency in laboratory practices. They will understand the basic concepts and principles underlying scientific methodology and be able to collect, analyze, and interpret data. They will learn a body of scientific knowledge and be able to judge the merits of arguments about scientific issues. They will be able to perform basic algebraic manipulations and to use fundamental algebraic concepts to solve word problems and equations. They will be able to use basic knowledge of statistics to interpret and to analyze data. They will be able to evaluate arguments based on quantitative data.

7. Students will demonstrate the ability to analyze, to evaluate, and to make inferences from oral, written and visual materials. They will be skilled in inquiry, logical reasoning, and critical analysis. They will be able to acquire and evaluate relevant information, analyze arguments, synthesize facts and information, and offer logical arguments leading to creative solutions to problems.