

**ADVANCED WILDLIFE TECHNOLOGY
FRSC 2263**

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PREREQUISITES: FRSC 2261

TEXT: None

SUPPLIES: 3x5" index cards Cotton or Synthetic Batting Borax

COURSE OBJECTIVES: To develop within the student a high level of demonstrable proficiency in the following areas:

- A. Wildlife Management Literature
 - 1. Serials
 - 2. Monographs
 - 3. Literature Searches
 - 4. Developing Personal Reprint Library
 - 5. Report Writing

- B. Observations and Records
 - 1. Data Forms
 - 2. Daily Journals
 - 3. Cameras

- C. Collection and Preservation of Biological Material
 - 1. Tissues and Fixatives
 - 2. Blood Collection
 - 3. Preparation of Study Skins

- D. Post Mortem Examination of Wild Animals
 - 1. Purpose / Need
 - 2. Anatomy
 - 3. Necropsy

- E. Capturing and Marking Wild Animals
 - 1. Devices for Capturing Mammals
 - 2. Devices for Capturing Birds
 - 3. Use / Administration of Anesthetics
 - 4. Marking Techniques

- F. Estimating Population Parameters

1. Basic Biometric Considerations (range, mean, bias, sampling error, etc.)
2. Types / Examples of Population Estimators (Survey, Index, Sample, Census)
3. Physiological Indicators (Fat Stores, Reproduction, Parasite Loads, etc.)

G. Wildlife Damage Control

1. Methods of Control (habitat modifications, biological control, etc.)
2. Applicable Techniques for Select Species

H. Basic Mammalian Taxonomy

1. The Mammalian Skull
2. Skull key to Selected Orders of Mammals
3. Species Recognition by Mammalian Skull Characteristics

I. Sex and Age Determination

1. Terminology (age class, year class, cohort, etc.)
2. Pre-natal Age Determination in White-tailed Deer
3. Mammals (Wild Swine, W-T Deer, Gray Squirrel, etc.)
4. Birds (Waterfowl, Gallinaceous Birds, Mourning Dove, etc)

J. Seed Identification

K. Boone and Crockett

1. Requirements
2. Scoring Methods

GRADING SYSTEM:

		<u>GRADE</u>
3 Hourly Exams (13.3% each)	40%	A 90 - 100%
Final Exam (Cumulative)	25%	B 80 - 89%
Term Paper*	15%	C 70 - 79%
3 Study Skins/3 track casts*	15%	D 60 - 69%
(2 mammals/1 bird <u>or</u> 2 birds/1 mammal)		F < 60%
<u>Lab Participation/Quizzes</u>	<u>5%</u>	
Total	100%	

* Deadlines will be announced for the term paper and the study skins. If either project is turned in after the deadline a grade of 0% will be recorded. Study skins will receive a grade penalty if they are turned in "wet."

Students enrolled in the Forestry, and Wildlife Technology Programs will be expected to demonstrate an understanding of subject matter requiring higher order processing skills. Examination questions may include essay, synthesis, analysis, and application; as well as completion, multiple choice, true-false, and matching. Computational skills and drawing or diagramming may also be required.

Field Trips: Students will be involved in field trips during this course, including a two day trip to Sapelo Island (or a substitute) to apply deer capture and necropsy techniques.

ATTENDANCE: Students whose number of total absences is more 6 (the equivalent of 20% of class meetings) will receive a grade of "F" for the course. Fewer absences than 6 may result in grade penalties at the discretion of the instructor. Excessive tardiness will also result in grade penalties. 3 lates = 1 absence.

Absences of 6 or fewer will result in loss of the Lab Participation points in the following increments:

- 1-3 absences = no penalty
- 4 absences = lose 20% of partic. pts.
- 5 absences = lose 60% of partic. pts.
- 6 absences = lose 100% of partic. pts.

Students who are absent are responsible for any work or assignments missed.

With respect to exams, necessary arrangements will be made for students with diagnosed learning disabilities.

Makeup exams will not be given.

TARDINESS: Attendance will be recorded at the beginning of each class period, and a student entering late will have been considered absent for that day. It is the **student's responsibility** to inform the instructor of his/her tardiness at the end of class so that unexcused absences are not inadvertently recorded. 3 lates = 1 unexcused absence.

- BEHAVIOR:**
1. Students are expected to reflect their status as mature adults and behave courteously towards their classmates.
 2. **No eating or use of tobacco is allowed in the classroom or indoor labs.** Failure to comply will result in a zero for lab participation and possible further grade deductions. Drinks in sealable containers may be brought in. **NO CANS.**
 3. **Cell Phone/Pager Policies:**
All cell phones and pagers must either be left in a vehicle or turned off. If a student's cell phone goes off during class, there will be a pop quiz over any material covered in the course to that point.

A student checking their phone or pager for calls or text messages **will equate** to that phone ringing.

4. Appropriate clothing should be worn during field labs (i.e., heavy pants, boots, jackets). Briar prickles and poisonous plants are a reality you should be prepared for.

POLICY ON CHEATING: Cheating will not be tolerated. A grade of F (0%) will be submitted for the quiz or exam in question, with further disciplinary action possible.

Study Skin Species

In an effort to build up a more diverse specimen collection, bonus points will be given to students that turn in some of the more uncommon species. The listed bonus points will be added to the FINAL EXAM point total. Bonus points will be received only if the following conditions are met:

1. Specimens must be brought to me in an unprepared state (frozen). Specimens brought to me already prepared will not be accepted. Students will receive all the bonus points only if they provide the specimen – partial points will be given for animals provided by the instructor.
2. Completed study skins must **at least be of average quality**, and skulls of any mammal species **must be intact**. If you are turning in one of these specimens, it might be wise to practice on a couple of common species so that your study skin will be of adequate quality.
3. The person turning in the study skin must be the one that prepared it.
4. The listed point values are for specimens collected by the student. Students will get partial credit for specimens provided by the instructors.

Mammals

<u>Species</u>	<u>Bonus points</u>
<i>Dasyopus novemcinctus</i> (Nine-banded Armadillo)	20
<i>Lasiurus intermedius</i> (N. Yellow Bat)	30
<i>Lasiurus cinereus</i> (Hoary Bat)	30
<i>Pipistrellus subflavus</i> (Eastern Pipistrelle)	20
<i>Lasionycteris noctivagans</i> (Silver-haired Bat)	30
<i>Condylura cristata</i> (Star-nosed Mole)	50
<i>Cryptotis parva</i> (Least Shrew)	15
<i>Blarina spp.</i> (Short-tailed Shrews)	15
<i>Sorex spp.</i> (Shrews)	15
<i>Sylvilagus palustris</i> (Marsh Rabbit)	20
<i>Sylvilagus aquaticus</i> (Swamp Rabbit)	15

<u>Species</u>	<u>Bonus points</u>
<i>Tamiasciurus hudsonicus</i> (Red Squirrel)	30
<i>Marmota monax</i> (Woodchuck)	10
<i>Zapus hudsonius</i> (Meadow Jumping Mouse)	40
<i>Napaeozapus insignis</i> (Woodland Jumping Mouse)	40
<i>Geomys pinetis</i> (Southeastern Pocket Gopher)	30
<i>Ondatra zibethicus</i> (Muskrat)	20
<i>Neotoma floridana</i> (Eastern Woodrat)	15
<i>Microtus spp.</i> (Voles)	25
<i>Vulpes vulpes</i> (Red Fox)	10
<i>Spilogale putorius</i> (Spotted skunk)	50
<i>Mustela frenata</i> (Long-tailed weasel)	50
<i>Mustela nivalis</i> (Least weasel)	50

Birds

<u>Species</u>	<u>Bonus points</u>
Redhead, Canvasback, Greater Scaup, Lesser Scaup, Common Merganser, Red-breasted Merganser	10
Northern Pintail, Eiders, Goldeneyes, Scoters Oldsquaw	15
Whistling Ducks	30
Geese other than Canada Geese	20
American Woodcock	10
Rails	10
Ruffed Grouse	15
Other birds	varies depending on the species

Track Casts Collection

Students must prepare a minimum of 3 plaster of paris casts of 3 different wildlife species during the semester. The only acceptable bird tracks are the Wild Turkey and the Canada Goose. The following tracks will be accepted:

Feral Hog	<i>Sus scrofa</i>
Red Fox	<i>Vulpes vulpes</i>
Gray Fox	<i>Urocyon cinereoargenteus</i>
Bobcat	<i>Lynx rufus</i>
Mountain Lion	<i>Puma concolor</i>
Raccoon	<i>Procyon lotor</i>
Black Bear	<i>Ursus americanus</i>
River Otter	<i>Lontra canadensis</i>
Striped Skunk	<i>Mephitis mephitis</i>
Spotted Skunk	<i>Spilogale putorius</i>
Mink	<i>Neovison vison</i>
Virginia Opossum	<i>Didelphis virginiana</i>
Gray Squirrel	<i>Sciurus carolinensis</i>
Fox Squirrel	<i>Sciurus niger</i>
Beaver	<i>Castor canadensis</i>
Muskrat	<i>Ondatra zibethicus</i>
Woodchuck	<i>Marmota monax</i>
Nine-banded Armadillo	<i>Dasypus novemcinctus</i>
Wild Turkey	<i>Meleagris gallopavo</i>
Canada Goose	<i>Branta canadensis</i>