Wildland Resource Techniques, WILD 2400
Fall Semester 2017
3 Credits
Vernal Center (USU)
Tuesdays 6:00 – 8:45pm

Instructor – Dr. Mark Chynoweth
Email – mark.chynoweth@usu.edu
Phone – 435-722-1781 / (Text cell # 716-860-6790 for emergencies.)
Office Location – Vernal Room B221P
Office Hours – Tuesday, Thursday, 4:00 – 5:30pm. If these office hours do not fit your schedule, please contact me by email or phone to make alternative arrangements. You are also welcome to stop by anytime!

Prerequisites: BIOL 1610, BIOL 1620

Recommended Textbooks (optional)
• Monitoring Manual for Grassland, Shrubland, and Savanna Ecosystems, Vols I and II. USDA ARS Jornada Experimental Range. 2005. Available at:
  http://www.ntc.blm.gov/krc/viewresource.php?courseID=281&programAreaId=148 (Free)
  http://www.blm.gov/nstc/library/pdf/samplveg.pdf (Free)

Field Guides: These are my favorite field guides for students interested in identifying plant/wildlife species in Utah. These are completely optional.
• Desert Plants of Utah. Falkenberg, Anderson & Allen. 1996
• Mountain Plants of Northeastern Utah. Anderson, Allen & Holmgren. 1996
• National Geographic Field Guide to Birds of North America. Dunn & Alderfer. 2011

Equipment
• Binoculars, purchased or borrowed. I can assist you in choosing an appropriate pair if you choose to purchase.
• Field notebook, sturdy and waterproof, and a waterproof pen
• Camera. Anything from your phone to a digital SLR will work
• Sturdy hiking shoes
• Appropriate cold-weather clothing and a 1-quart water bottle

PLEASE COME TO ALL CLASSES PREPARED TO GO OUT IN THE FIELD IN ANY WEATHER CONDITIONS.

COURSE OVERVIEW
This course will introduce students to the techniques used by wildlife managers as they seek to understand and manage wildlife populations and habitat relationships. The course is designed for beginning students who have completed the prerequisite courses. Course coverage is structured to provide the foundations for the remainder of the wildlife science curriculum. This will be accomplished through a combination of lectures, discussions, lab work, field work, student presentations, and writing assignments.
EXPECTED LEARNING OUTCOMES FOR THE LAB
After completing this course, students should be well-versed in the following competencies of wildlife techniques related to management:
1. Ability to communicate using the language associated with the techniques commonly used by natural resource managers for working with the important mammals, reptiles, and amphibians of the Intermountain West.
2. Ability to understand the ecological and behavioral concepts associated with the application of different techniques for measuring wildlife, range, and forest resources.
3. Develop specific skills and competencies to solve problems related to wildlife management.
4. Ability to perform critical thinking, synthesis, library use, and scientific writing.

COURSE GRADES
The final course grade you earn will be based on two mid-term tests, a final exam, two online discussion assignments, one writing assignment, lab assignments, and a field project and class presentation. Tests 1 and 2 and the final exam will count 20% each, the online discussions 10%, the first writing assignment 10%, and the field project and presentation 20% of your final grade. The final exam is cumulative for the class.

Grading
USU’s standard grading scale will be applied:

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<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>100 to 93</td>
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<tr>
<td>A-</td>
<td>92 to 90</td>
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<tr>
<td>B+</td>
<td>89 to 87</td>
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<tr>
<td>B</td>
<td>86 to 83</td>
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<tr>
<td>B-</td>
<td>82 to 80</td>
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<td>C+</td>
<td>79 to 77</td>
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<td>C</td>
<td>76 to 73</td>
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<tr>
<td>C-</td>
<td>72 to 70</td>
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<tr>
<td>D+</td>
<td>69 to 67</td>
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<tr>
<td>D</td>
<td>66 to 60</td>
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<tr>
<td>F</td>
<td>59 and below</td>
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ASSIGNMENT DESCRIPTIONS
1. For the first assignment, select any wildlife technique of your choice and write a descriptive report that covers the historical evolution of the technique. This report must be 4-pages, double-spaced in Times New Roman 12-point font. It must also be supported by at least fifteen relevant references, which should be cited and listed according to the format of the Journal of Wildlife Management. You will submit this one week before the final deadline for editing by Dr. Chynoweth. You will then revise the paper and resubmit it.

2. The second assignment is a PowerPoint presentation on your field project. You will give this presentation to the class during the last class meeting time.

WILD 2400 Field Project
Structured class field trips are often only marginally successful because of the group size involved and associated problems of disturbance and logistical constraints. For the project component of this course you will be expected to conduct an unstructured field trip of ~4 hours in duration on your own. The objectives of this exercise are to:

(1) Provide an opportunity to apply the skills acquired in class to field situations; and

(2) Provide a template for making field-based faunal observations in the future.
You should select a time of day when animals are likely to be most active (i.e., early morning). You may defer completion of this assignment until the latter part of the course. That way, you will have the advantage of having completed all the identification components of the course prior to taking your trip to the field. As far as equipment for this outing, you should, at minimum, have the following: binoculars, digital camera, ruler or tape measure, field notebook and pencil, field guides and/or other identification materials. You should also have a GPS unit, preferably with a tracking function. You can borrow a GPS unit from Dr. Chynoweth if you do not have one.

Your assignment is to record everything you sense (see, hear, smell). This might include the animals themselves, vocalizations, their sign (tracks and/or scat, evidence of browsing), or their remains such as carcasses or skulls. In your notes you should also describe the weather conditions (cloud cover, temperature, approximate wind velocity) and vegetation composition of the habitat. Take photos of the habitat. If you observe interesting animal behavior, make notes.

For animal ID, record not only the species but why you identified the animal as species X, specifically the diagnostic features such as those discussed in class—not just because you found it matched the picture in your field guide. For tracks, scats, and other sign, record pertinent measurements and take digital photos, using appropriate objects for scale.

With your GPS instrument, you should geo-reference your route and the location of important observations. Dr. Chynoweth can provide you with a map of your trip. Write all this up in a detailed description of your outing and transmit a digital version of your report to the instructor. Include photos in your report. Note that your narrative should include not only the what, where, and when, but where appropriate, some speculation as to the how or why.

TENTATIVE SCHEDULE, WILD 2400, FALL 2017 (Schedule is subject to change)

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<thead>
<tr>
<th>Week</th>
<th>Content</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>Week 1</td>
<td>Course introduction; Field safety; Orienteering/GPS</td>
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<tr>
<td>Week 2</td>
<td>Introduction to field data collection Managing &amp; summarizing field data</td>
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<td>Week 3</td>
<td>Forest measurement techniques</td>
<td>Online Discussion</td>
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<td>Week 4</td>
<td>Forest data analysis Processing and summarizing forest data</td>
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<td>Week 5</td>
<td>EXAM 1</td>
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<tr>
<td>Week 6</td>
<td>Range measurement techniques</td>
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<tr>
<td>Week 7</td>
<td>Range data analysis Processing and summarizing range data</td>
<td>Draft of wildlife technique assignment</td>
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<td>Week 8</td>
<td>Wildlife capture &amp; handling/Radio telemetry</td>
<td>Final wildlife technique assignment</td>
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<td>Week 9</td>
<td>Use of remote cameras in wildlife ecology</td>
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<td>Week 10</td>
<td>EXAM 2</td>
<td></td>
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<tr>
<td>Week 11</td>
<td>Noninvasive genetic methods Processing and summarizing remote camera data</td>
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<td>Week 12</td>
<td>Wildlife distribution, habitat selection, and movement Analyzing wildlife habitat use</td>
<td>Online Discussion</td>
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<td>Week 13</td>
<td>Harvest management</td>
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<td>Week 14</td>
<td>Estimating wildlife abundance; population dynamics</td>
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<tr>
<td>Week 15</td>
<td>Class presentations for field projects</td>
<td>Submit field project assignment</td>
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EXAM 3 DURING FINAL EXAM PERIOD
Students with Disabilities
The Americans with Disabilities Act states: "Reasonable accommodation will be provided for all persons with disabilities in order to ensure equal participation within the program. If a student has a disability that will likely require some accommodation by the instructor, the student must contact the instructor and document the disability through the Disability Resource Center (797-2444), preferably during the first week of the course. Any request for special consideration relating to attendance, pedagogy, taking of examinations, etc., must be discussed with and approved by the instructor. In cooperation with the Disability Resource Center, course materials can be provided in alternative format, large print, audio, diskette, or Braille."

Withdrawal Policy and "I" Grade Policy
Students are required to complete all courses for which they are registered by the end of the semester. In some cases, a student may be unable to complete all of the coursework because of extenuating circumstances, but not due to poor performance or to retain financial aid. The term 'extenuating circumstances' includes: (1) incapacitating illness which prevents a student from attending classes for a minimum period of two weeks, (2) a death in the immediate family, (3) financial responsibilities requiring a student to alter a work schedule to secure employment, (4) change in work schedule as required by an employer, or (5) other emergencies deemed appropriate by the instructor.

Standards of Conduct
Students need to be aware of and follow university policy on academic conduct. This is a class with written assignments. Academic dishonesty in any form cannot be tolerated. This includes aiding others (directly or indirectly) in committing dishonest acts. On in-class activities, protect your independent work. Instances of academic dishonesty will be reported to the University Student Behavior committee for appropriate action. Possible results of proven academic dishonesty range from no credit/points awarded for the disputed exercise to expulsion from the university.

Cheating, Plagiarism, And Other Forms of Academic Dishonesty
All work that you submit as your own work must, in fact, be your own work. For example, if your paper presents the ideas of others, you must clearly indicate this by citing the source. Word-for-word language taken from other sources—books, papers, web sites, people, etc.—must be placed in quotation marks, and the source identified. Likewise, work on quizzes and exams must be your own work, not copied or taken from other students’ work, and you must comply with instructions regarding use of books, notes, and other materials. In accordance with the Utah State University policy on academic dishonesty, students in this course who submit the work of others as their own (plagiarize), cheat on examinations, help other students cheat or plagiarize, or commit other acts of academic dishonesty will receive appropriate academic penalties, up to and including failing the course and expulsion. Plagiarism or cheating on exams will result in an “F” on that exam, very likely resulting in a lower or possibly a failing final grade in the course overall. In cases where the instructor has reason to believe the cheating or plagiarism was premeditated or planned, students may receive an “F” for the course.

Please consult with me on when and how to document sources if you have any possible questions about what might constitute an act of plagiarism or cheating.

Learning Assumptions & Expectations
• Success is your choice! If you choose to be successful, I will be happy to help you. **Each of you has the potential to succeed in this class.**
• Respect is one of the foundations of an environment conducive to learning. This class will have a positive and respectful learning environment. In class discussions, everyone should be courteous and respectful of others: disrespectful comments or behavior will not be tolerated. **This includes silencing your cell phones, no texting, no web surfing, etc.**
• One of the most important aspects of learning is being able to be an active listener. As you listen to your classmates, be attentive and supportive. Everyone has something valuable to contribute to our class and your success.
• Times are tough in conservation biology, and we talk about a lot of potentially depressing subjects in this course. Despite this, we all need to stay positive. Humor and a wry take on things help your overall comprehension, enjoyment, ability to focus, and comprehension.
• I am always open to feedback about how I can best meet your needs as a student. Feel free to make suggestions on how this course can be improved or adjusted.
• You will attend all class sessions, arriving before the start of class.

Doing Well In This Course
Focus on learning, not on your grade. Make sure you complete all of our assignments on time, and do a thorough job. If you interact with the material and complete the course assignments, you should easily be able to pass this class. This course should be fun and rewarding. Although it needs to be taken seriously, this course should not create undo stress and anxiety. If you are having trouble with the assignments, not doing well on the exams, or having any other problems, please talk to me.
Dr. Mark Chynoweth’s Wildland Resource Techniques
WILD 2400

I have read our syllabus and now know what to expect from this class, both in terms of the general layout of our course and desired learning outcomes. In particular, I am aware of the workload this class requires each and every week. I am aware that it is my responsibility to keep up with all assigned reading and submit all my assignments by their deadlines. Missing deadlines, poor writing, or not keeping up with our readings will harm both my assignment grades and my overall performance in our course. I also understand that studying in groups, frequently reviewing past material, reviewing my lecture notes is a great way to improve my grade and (more importantly) boost my comprehension of the concepts and facts of conservation.

Name (please print neatly): _________________________________________

Today’s Date: _____________________________________________________

Signature: _______________________________________________________

Please fill in, sign, and hand in to Dr. Chynoweth