Course Description

This class is designed to train natural resource students in developing and implementing programs for the inventory, monitoring, and assessment (IMA) of wildland ecosystems. The class will cover all phases of the monitoring process, from generating hypotheses and study design, to data collection and analysis, to interpretation and reporting of results. Basic IMA techniques will be introduced, and there will be an emphasis on data analysis and interpretation.

Online Course Fee

$15 per credit course fee is applied to all online courses to sustain current digital technologies and support services required for engaging and effective online learning.

Required Textbooks and Resources

There is No Required Textbook for this course. All reading will be provided open-source on the course CANVAS page.

Computer: You should have access to a computer to retrieve course content and to complete assignments. Contact Dr. Chynoweth if you have any questions or concerns about computer access.

IDEA Objectives

1. Learning fundamental principles, generalizations, or theories
2. Learning to Apply Course Material (to improve thinking, problem solving, and decisions)
3. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course

Evaluation Methods and Criteria

Final grades will be based on:

- 300 pts (30%) Lab Assignments (10 @ 30 pts each)
- 150 pts (15%) Quizzes (3 @ 50 pts each)
- 150 pts (15%) Midterm Exam
- 150 pts (15%) Final Exam (not cumulative)
- 250 pts (25%) Final Paper (Develop a written natural resource monitoring proposal. Proposals will be developed individually.)
Monitoring proposal guidelines

Your assignment is to develop a written forest, rangeland or wildlife monitoring proposal. Proposals will be developed individually. The final graded version of proposal is due midnight on the last day of USU classes and is worth 250 pts (25% of your final grade). Please note that you will receive an additional 25% off for every day your monitoring proposal is late. For each section below, refer to PowerPoint presentations for more detailed information on what is expected and typically included in the proposal. Throughout the semester, I will provide you with a number of readings that should help you put together a solid proposal. Please don’t wait until the last minute to start your proposal. This is a substantial portion of your grade for the course. Contact me any time with questions. E.g. is the topic of my proposal adequate? Is my abstract well written? Is my conceptual model clear? Did I do a good job at identifying my proposal objectives and goals? Are the statistical methods I propose in line with my objectives? Etc.

Proposal structure and content:

1. Cover page with title, author, date
2. Summary < 350 words
3. Introduction
   1. Background and literature necessary to understand problem and proposed work
   2. Conceptual model
   3. Monitoring objective
4. Methods section
   1. Study site description including a map
   2. Sampling design
   3. Field methods
   4. Analytical methods
5. Deliverables and expected outcomes
6. Timeline
7. Budget
8. Literature cited (formatting and correct citations of others’ work)
9. Tables and figures with legends

Proposal formatting:

1. Format consistent with Journal of Wildlife Management: Available on Canvas)
2. No more than than 3,500 words (~12 double---spaced pages of text)
3. Use 12 pts font and 1 inch margins
4. Number pages
5. Be clear and concise
6. Use correct grammar and sentence structure

提交迟交作业、实验室、测验或考试

请务必联系我，如果您在提交作业时遇到问题。如果由于生活中的问题而无法提交作业，我可能会根据下面的政策做出例外。然而，这些例外是很少的。

作业和实验室：将有1% per hour的扣分，一天扣24%。
测验和考试：不接受迟到的测验或考试。

点赞 评分方案

课程将采用以下评分标准：

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<thead>
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<th>Grade</th>
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<tr>
<td>A</td>
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<td>A-</td>
<td>&lt; 93.0 % to 90.0%</td>
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<td>B+</td>
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<td>B</td>
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<td>Grade</td>
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## Course Schedule/Outline

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<thead>
<tr>
<th>Module</th>
<th>Topics</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>1</td>
<td>Course Overview and Introduction to IMA</td>
<td>Assignment 1</td>
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<tr>
<td>2</td>
<td>Monitoring Process and Conceptual Models</td>
<td>Assignment 2</td>
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<td>3</td>
<td>Objectives and Adaptive Management</td>
<td>Assignment 3</td>
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<td>4</td>
<td>Introduction to Sampling Design</td>
<td>Assignment 4</td>
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<td>5</td>
<td>Vegetation and Habitat Sampling</td>
<td>Quiz 1</td>
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<td>6</td>
<td>Hypothesis Testing</td>
<td>Assignment 5</td>
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<td>7</td>
<td>ANOVA</td>
<td>Assignment 6; Quiz 2</td>
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<td>8</td>
<td>MIDTERM</td>
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<td>9</td>
<td>Correlation and Regression</td>
<td>Assignment 7</td>
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<td>10</td>
<td>Qualitative and Biodiversity Monitoring</td>
<td>Assignment 8</td>
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<td>11</td>
<td>Wildlife Sampling</td>
<td>Assignment 9</td>
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<td>12</td>
<td>Forestry Sampling</td>
<td>Assignment 10; Quiz 3</td>
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<td>13</td>
<td>THANKSGIVING BREAK</td>
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<tr>
<td>14</td>
<td>Range Sampling</td>
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<tr>
<td>15</td>
<td>Monitoring proposal and Final Exam preparation</td>
<td>Final Paper Due</td>
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## University Policies & Procedures

### COVID-19 Classroom Accommodations

To ensure that you receive the appropriate accommodation for COVID-19 related challenges, the University requires you to fill out the COVID-19 Questionnaire (https://www.usu.edu/covid-19/questionnaire/index.php). Upon doing so, the University COVID CARE Team (https://www.usu.edu/covid-19/if-you-are-sick/care-team.php) will contact you to determine your needs and how to support you. The CARE Team will also contact your instructors and provide important direction on how best to accommodate your needs. For additional reference, please see USU's Attendance and Excused Absence (https://catalog.usu.edu/content.php?catoid=12&navoid=3160) policy and the COVID-19 Classroom Accommodations (https://www.usu.edu/covid-19/operations/accomodations) page.

### Reducing COVID-19 Risk

You can help keep classes, events, and activities happening in person this semester by following these steps:

1. **Get vaccinated if you're able.** Vaccines are the best available tool to help stop the spread of COVID-19. They are safe, free, and easy to access.
2. If you are vaccinated, let USU know. Please upload your proof of full vaccination (http://aggiehealth.usu.edu/) to AggieHealth. If you are exposed to COVID-19, USU’s case containment will not require you to quarantine if they know you are vaccinated and you do not have symptoms.

3. Stay home if you’re sick and get tested for COVID-19 if you have symptoms or have been exposed. It’s important to not bring any illness to campus.

4. Wear a mask indoors. Public health experts recommend that even vaccinated people wear masks indoors in high COVID-19 transmission areas, which includes most of Utah.

If USU’s COVID Case Containment team identifies an uncontained situation in the classroom, you will be notified of any temporary changes to your course delivery method through a Canvas announcement. Please make sure you are receiving immediate notifications of new Canvas announcements. The situation will be handled according to protocols on the COVID Classroom Exposure (https://www.usu.edu/covid-19/students/classroom-exposure) page.

Class Seating Charts (For In-Person Classes)

In classes with more than 10 students, a seating chart will be used to track where you are sitting. After the first week of classes, your instructor will tell you how to enter your seat number in Canvas. You must sit in the same seat for the rest of the semester. This is extremely important for tracking cases of COVID-19 and helping classes remain in person.

Academic Freedom and Professional Responsibilities

Academic freedom is the right to teach, study, discuss, investigate, discover, create, and publish freely. Academic freedom protects the rights of faculty members in teaching and of students in learning. Freedom in research is fundamental to the advancement of truth. Faculty members are entitled to full freedom in teaching, research, and creative activities, subject to the limitations imposed by professional responsibility. Faculty Code Policy #403 (http://www.usu.edu/hr/files/uploads/Policies/403.pdf) further defines academic freedom and professional responsibilities.

Academic Integrity – "The Honor System"

Each student has the right and duty to pursue his or her academic experience free of dishonesty. To enhance the learning environment at Utah State University and to develop student academic integrity, each student agrees to the following Honor Pledge:

"I pledge, on my honor, to conduct myself with the foremost level of academic integrity."

A student who lives by the Honor Pledge is a student who does more than not cheat, falsify, or plagiarize. A student who lives by the Honor Pledge:

- Espouses academic integrity as an underlying and essential principle of the Utah State University community;
- Understands that each act of academic dishonesty devalues every degree that is awarded by this institution; and
- Is a welcomed and valued member of Utah State University.

Academic Dishonesty

The instructor of this course will take appropriate actions in response to Academic Dishonesty, as defined the University’s Student Code. Acts of academic dishonesty include but are not limited to:

- **Cheating**: using, attempting to use, or providing others with any unauthorized assistance in taking quizzes, tests, examinations, or in any other academic exercise or activity. Unauthorized assistance includes:
  - Working in a group when the instructor has designated that the quiz, test, examination, or any other academic exercise or activity be done “individually;”
  - Depending on the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments;
  - Substituting for another student, or permitting another student to substitute for oneself, in taking an examination or preparing academic work;
  - Acquiring tests or other academic material belonging to a faculty member, staff member, or another student without express permission;
  - Continuing to write after time has been called on a quiz, test, examination, or any other academic exercise or activity;
  - Submitting substantially the same work for credit in more than one class, except with prior approval of the instructor; or engaging in any form of research fraud.

- **Falsification**: altering or fabricating any information or citation in an academic exercise or activity.

- **Plagiarism**: representing, by paraphrase or direct quotation, the published or unpublished work of another person as one’s own in any academic exercise or activity without full and clear acknowledgment. It also includes using materials prepared by another person or by an agency engaged in the sale of term papers or other academic materials.

For additional information go to: ARTICLE VI. University Regulations Regarding Academic Integrity (https://studentconduct.usu.edu/studentcode/article6)

Sexual Harassment/Title IX

Utah State University is committed to creating and maintaining an environment free from acts of sexual misconduct and discrimination and to fostering respect and dignity for all members of the USU community. Title IX and USU Policy 339 (http://www.usu.edu/policies/339) address sexual harassment in the workplace and academic setting.
The university responds promptly upon learning of any form of possible discrimination or sexual misconduct. Any individual may contact USU's Office of Equity (https://equity.usu.edu/) for available options and resources or clarification. The university has established a complaint procedure to handle all types of discrimination complaints, including sexual harassment (USU Policy 305 (http://www.usu.edu/policies/305/)), and has designated the Office of Equity Director/Title IX Coordinator as the official responsible for receiving and investigating complaints of sexual harassment.

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.

Students with Disabilities

USU welcomes students with disabilities. If you have, or suspect you may have, a physical, mental health, or learning disability that may require accommodations in this course, please contact the Disability Resource Center (DRC) (http://www.usu.edu/drc/) as early in the semester as possible (University Inn # 101, (435) 797-2444, drc@usu.edu (mailto:drc@usu.edu)). All disability related accommodations must be approved by the DRC. Once approved, the DRC will coordinate with faculty to provide accommodations.

Students who are at a higher risk for complications from COVID-19 or who contract COVID-19 may also be eligible for accommodations.

Diversity Statement

Regardless of intent, careless or ill-informed remarks can be offensive and hurtful to others and detract from the learning climate. If you feel uncomfortable in a classroom due to offensive language or actions by an instructor or student(s) regarding ethnicity, gender, or sexual orientation, contact:

- Division of Student Affairs: https://studentaffairs.usu.edu (https://studentaffairs.usu.edu/), (435) 797-1712, studentservices@usu.edu (mailto:studentservices@usu.edu), TSC 220
- Student Legal Services: https://ususa.usu.edu/student-association/student-advocacy/legal-services (https://ususa.usu.edu/student-association/student-advocacy/legal-services), (435) 797-2912, TSC 326,
- Access and Diversity: http://accesscenter.usu.edu (http://accesscenter.usu.edu/), (435) 797-1728, access@usu.edu (mailto:access@usu.edu);
- TSC 315
- Multicultural Programs: http://accesscenter.usu.edu/multiculture (http://accesscenter.usu.edu/multiculture), (435) 797-1728, TSC 315
- LGBTQA Programs: http://accesscenter.usu.edu/lgbtqa (http://accesscenter.usu.edu/lgbtqa/), (435) 797-1728, TSC 3145
- Provost's Office Diversity Resources: https://www.usu.edu/provost/diversity (https://www.usu.edu/provost/diversity/), (435) 797-8176

You can learn about your student rights by visiting:
- The Code of Policies and Procedures for Students at Utah State University: https://studentconduct.usu.edu/studentcode (https://studentconduct.usu.edu/studentcode/)

Grievance Process

Students who feel they have been unfairly treated may file a grievance through the channels and procedures described in the Student Code: Article VII (https://studentconduct.usu.edu/studentcode/article7).

Full details for USU Academic Policies and Procedures can be found at:

- Student Conduct (http://www.usu.edu/studentconduct)
- Student Code (https://studentconduct.usu.edu/studentcode/)
- Academic Integrity (https://studentconduct.usu.edu/studentcode/article6)

Emergency Procedures

In the case of a drill or real emergency, classes will be notified to evacuate the building by the sound of the fire/emergency alarm system or by a building representative. In the event of a disaster that may interfere with either notification, evacuate as the situation dictates (i.e., in an earthquake when shaking ceases or immediately when a fire is discovered). Turn off computers and take any personal items with you. Elevators should not be used; instead, use the closest stairs.

Mental Health

Mental health is critically important for the success of USU students. As a student, you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce your ability to participate in daily activities. Utah State University provides free services for students to assist them with addressing these and other concerns. You can learn more about the broad range of confidential mental health services available on campus at Counseling and Psychological Services (CAPS) (https://counseling.usu.edu).
Students are also encouraged to download the “SafeUT App” (https://healthcare.utah.edu/uni/programs/safe-ut-smartphone-app) to their smartphones. The SafeUT application is a 24/7 statewide crisis text and tip service that provides real-time crisis intervention to students through texting and a confidential tip program that can help anyone with emotional crises, bullying, relationship problems, mental health, or suicide related issues.

“We would like to acknowledge that all USU courses are taught on the traditional lands of the Diné, Goshute, Paiute, Shoshone, and Ute Peoples past and present, and honor the land itself and the people who have stewarded it throughout the generations.”

ёт️ Land Acknowledgement Statement