I. Course Information
This lab course allows you to apply the content knowledge from the General Ecology course using the scientific process. You will continue to 1) practice the process of science, 2) collaborate with others, and 3) communicate scientifically as you did in BIOL 1615 and 1625. You will learn common techniques in ecology, and will collaborate with peers on designing, carrying out, and analyzing authentic projects. You will develop scientific writing and speaking skills.

It might seem weird that we will be doing this in an online platform. The reality is that a lot of ecologists collaborate in research using remote platforms. Learning how to do this can be a really useful and transferrable job skill.

II. Instructor Information
Professor: Michelle A. Baker
435-797-7131
michelle.baker@usu.edu
Drop-in office hours on Zoom TBD

Teaching Assistant (TA): Jack Marchetti
jack.marchetti28@gmail.com
Drop-in office hours on Zoom TBD

III. Required Lab Materials
- Course fee: Your $50 fee is used to partially support your graduate teaching assistant
- Use our course Canvas site to receive announcements, retrieve documents, submit assignments, participate in discussions, and take quizzes. Our Canvas site is organized into weekly modules that scaffold the research experience.
- We don't have a textbook. If you have yours from General Ecology, you are welcome to use it as a reference.
- Students are expected participate from a distance and will provide their own computer and network access, or use a networked computer from a campus computer lab. A webcam and microphone may be needed for Zoom office hours or for meeting with classmates. You will need to download a free statistics program called R.
IV. Course Objectives.

<table>
<thead>
<tr>
<th>Biology Department learning outcomes</th>
<th>IDEA Center learning objectives</th>
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<tbody>
<tr>
<td>1. Practice the process of science (including using quantitative reasoning).</td>
<td>• Develop specific skills, competencies, and points of view needed by professionals in the field most closely related to this course (E)</td>
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<td>• Learning appropriate methods for collecting, analyzing, and interpreting numerical information (I)</td>
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<td>2. Collaborate with others and work as a team.</td>
<td>• Acquire skills in working with others as a member of a team (E)</td>
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<td>3. Communicate interpretations to scientists and the general public.</td>
<td>• Develop skill in expressing oneself orally or in writing (E)</td>
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<td>• Learning how to find, evaluate, and use resources to explore a topic in depth (I)</td>
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V. Meeting Course Objectives: Assignments

- **Online quizzes, discussions or small assignments on Canvas (20% of grade).** Quizzes are used to make sure you understand the main takeaways for each module. Quizzes will be competency-based meaning that you can repeat the quiz until you receive at least 75% of available credit. Discussions and assignments are meant to scaffold the research process that leads to your final report and presentation.

- **Group proposal (20% of grade).** Your group will write a 2-page proposal that outlines your project. Each student will provide peer review feedback on proposals from two other groups. Your TA will grade this assignment with a published grading rubric (Timmerman et. al. 2010).

- **Final lab report 25% of grade.** You will write a lab report, in the format of a scientific manuscript, regarding your ecology project. You will receive details in class and on Canvas. Although students will design the project and analyze data as a group, each student will write an individual 5000-word paper on their project. You are required to submit comments from the USU Science Writing Center from your first draft when you turn in your second draft (https://www.usu.edu/science/swc). Your TA will grade this assignment with a published grading rubric (Timmerman et. al. 2010).

- **Individual presentation (25% of grade).** You will record an individual presentation of your project, and upload it to an event in LinkedIn. Although students will design the project and analyze data as a group, each student will prepare and present their own talk. Presentations will be evaluated by the instructor, teaching assistant and class members using the published grading rubric (Sevian and Gonsalves 2008). Oral presentations will be 7 minutes in length and accompanied by PowerPoint slides covering the research question, hypothesis tested, methods, results, and conclusions.

- **Collaboration (10% of grade).** In this course (and often in life), a few heads are better than one. You will be assigned to a group at the beginning of the course. You will receive teamwork training and sign a group contract. You will receive feedback along the way. Twice, you will grade yourself and your group members in terms of how equitably everyone has contributed to the project tasks.
Grading Policy. Your grade will be reflected by your performance on these four major assignments. Final course grades are based on the following scale and will not be rounded up to the nearest whole number: A (93 to 100%), A- (90 to <93%), B+ (87 to <90%), B (83 to <87%), B- (80 to <83%), C+ (77 to <80%), C (73 to <77%), C- (70 to <77%), D+ (67 to <70%), D (60 to <67%), and F (0% to <60%).

VI. Lab Project Schedule
Because this is an online class, you will mostly be working asynchronously. You will be working remotely in groups and can communicate in real time using Zoom or asynchronously using email. You should engage with the Canvas module each week so that you don't fall behind. Each week there will be small assignments and/or quizzes on Canvas. These will be due every Saturday by 11:59 pm.

<table>
<thead>
<tr>
<th>Week</th>
<th>Lab Topic</th>
<th>Assignments or Quizzes Due</th>
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<tbody>
<tr>
<td>1</td>
<td>Course Introduction</td>
<td>Introduce yourself discussion, Syllabus quiz</td>
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<tr>
<td>2</td>
<td>(Labor Day on Monday) Doing Ecology Online</td>
<td>Quiz, Group compact assignment</td>
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<td>3</td>
<td>Proposal Development: Scientific Literature</td>
<td>Data set assignment, Literature search assignment</td>
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<td>4</td>
<td>Proposal Development: Experimental Design and Analysis</td>
<td>Proposal outline assignment</td>
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<td>5</td>
<td>Data Management with Spreadsheets</td>
<td>Collaboration quiz</td>
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<td>6</td>
<td>Data Analysis with R</td>
<td>Group proposal due, Statistics assignment</td>
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<td>7</td>
<td>Self-Guided Field Data Collection and Graphical Display – Human Demography</td>
<td>Demography assignment</td>
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<tr>
<td>8</td>
<td>Work on Research Project – ad hoc help/instruction as needed</td>
<td>Proposal peer review assignment</td>
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<tr>
<td>9</td>
<td>Work on Research Project – ad hoc help/instruction as needed</td>
<td>Make appointment with SWC</td>
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<tr>
<td>10</td>
<td>Work on Research Project – ad hoc help/instruction as needed</td>
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<tr>
<td>11</td>
<td>How to Give an Effective Presentation</td>
<td>Research Paper Draft Due-with Science Writing Center comments</td>
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<tr>
<td>12</td>
<td>Work on Research Presentation and Paper</td>
<td>Collaboration quiz</td>
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<tr>
<td>13</td>
<td>(Thanksgiving Break Wed-Fri) No lab this week</td>
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VII. Learning During a Pandemic
We are living in a pandemic, and life kind of sucks right now. You most likely know people who have lost their jobs, tested positive for COVID-19, have been hospitalized, or perhaps even died. You may have increased family care responsibilities, and you might be facing uncertain job prospects (or even been laid off).

Your instructors are fully committed to helping you learn everything you were hoping to learn from this class! If you become sick or have to care for a sick loved one and are not able to keep up with Ecology Lab, let your instructors and research group know as soon as possible. You don't have to divulge private health information, but let us know if you need help. We will do what we can to support you. We will make whatever accommodations we can to help you finish with success. We all may be under more stress because of the pandemic, but we can also be more flexible and understanding. If you tell us you are having trouble, we will not judge or think less of you. We hope you'll extend us the same grace.

If you do contract COVID-19, or learn that you have been in close contact with someone who has and you have to self-isolate, the University Cares Team can negotiate on your behalf with your professors. To access this help, please fill out the COVID-19 questionnaire (Links to an external site.) at the bottom of this website.

During the pandemic, the Student Nutrition Access Center (SNAC) USU’s Logan Campus food pantry is open for curbside pick up. Ordering and pick up information is available here (Links to an external site.).

Take care of your mental health as well as your physical health during the pandemic. USU has a number of tips and resources that can help on this website.

VIII. Attendance Policy (adapted from the USU Course Catalog):
The university views class attendance as an individual student responsibility. You may not attend a lab other than the one for which you are registered. Your TA will not provide you an opportunity to make up work missed because of an unexcused absence.

Unexcused absences include: being sent home due to coming to lab without the proper attire (in which case you will be sent home); coming to lab more than five minutes late (in which case you will be sent home) or leaving before group work has been submitted; family vacation; work.

The following are considered excused absences if properly documented: absences demanded by university-sponsored or sanctioned activities; mandatory participation as a student-athlete in NCAA-sanctioned competition; injury, illness or medical condition/status that is too severe or contagious for the student to attend class; major
injury, illness, medical condition/status, or death in a student's immediate family; required participation in military duties; mandatory admissions interviews for professional or graduate school; participation in legal proceedings that require the student's presence.

In the case of an excused absence, you must provide your TA with written evidence substantiating the reason for the absence (for example, a medical confirmation note that contains the date and time of the visit and the medical professional’s confirmation) prior to the date of absence if feasible. In cases where advance notification is not feasible (e.g., accident or emergency), the student must provide written documentation by the end of the second working day after the absence. If the absence is excused and properly documented, you must meet with your TA outside of class to discuss what you missed and your make-up work assignment. Any make-up work must be completed within 14 calendar days of the last day of the absence. Your TA will deny any excused absence make-up work requests that exceeds 20% of class sessions (more than two class sessions).

IX. Academic Freedom and Professional Responsibilities:

The university is a community dedicated, through promulgation of thought, truth, and understanding, to teaching, research, and service. It must therefore, be a place where innovative ideas, original experiments, creative activities, and independence of thought are not merely tolerated but actively encouraged. Thought and understanding flourish only in a climate of academic freedom and integrity, expressed collectively by colleges and departments as well as individually through research and teaching and as they exist within the wider context of advanced study as commonly understood by all universities. The community also values diversity and respect, without which there can be no collegiality among faculty and students. In addition, the university community values individual rights and freedoms, including the right of each community member to adhere to individual systems of conscience, religion, and ethics. Finally, the university recognizes that with all rights come responsibilities. USU Policy 403 further defines academic freedom and professional responsibilities.

X. University Regulations Regarding Student Conduct:

The University respects the rights of faculty to teach and students to learn. Maintenance of these rights requires classroom conditions that do not impede the learning process. Disruptive classroom behavior will not be tolerated. An individual engaging in such behavior may be subject to disciplinary action. “Disruptive classroom behavior” involves physical actions, verbal utterance, or other activities which interfere with either the faculty member’s ability to conduct the class or the ability of other students to profit from the instructional program. For more information: http://studentconduct.usu.edu/studentcode/article5

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:

•Michelle Bogdan, Director of Access and Diversity Center:(435) 797-1728, michelle.bogdan@usu.edu
•James Morales, Vice President of Student Services:(435) 797-1712, james.morales@usu.edu
• Brooke Lambert, LGBTQ+ Program Coordinator, Access and Diversity Center: (435) 797-1164, brooke.lambert@usu.edu
• Daryn Frischknecht, Student Advocate: (435) 797-7460

You can learn more about your student rights by visiting http://www.usu.edu/studentservices/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.

XI. Final Examination: No-Test Days Policy:
For classes that meet for a full semester, a five-day period designated as "no-test" days precedes final examinations. During this time, no major examinations, including final examinations will be given in order that students may concentrate on classwork, the completion of special assignments, writing projects, and other preparation for duly scheduled final examinations. Approved exceptions include final papers, weekly chapter quizzes, quizzes, projects, and examinations associated with a lab that does not meet during final examinations.

XII. Academic Appeals:
When a student feels that he/she has been treated unfairly by a specific professor or existing rules or regulations, there is a sequential process which should be followed in handling the situation. Problems in this area include disagreements regarding a course grade, intervening circumstances which prevented the student from following an assigned procedure, etc. When a student experiences such difficulties, he/she should first go to their TA within two weeks of receiving the posted grade in Canvas. It may be possible to resolve the problem at this level. Should no agreement be reached, the student may then take the situation to Lauren Lucas, the lab coordinator. Should no agreement be reached, the student may then take the situation to the department head. If no resolution is reached at that level, the student may take the problem to the dean of the college. If there is still no resolution, the matter will be forwarded to an appeals committee. As a final recourse, the student may take the problem to the Provost’s Office, where a final decision will be made.

XIII. The Honor System and Plagiarism:
The University expects that students and faculty alike maintain the highest standards of academic honesty. The Code of Policies and Procedures for Students at Utah State University (Student Conduct) addresses academic integrity and honesty and notes the following:

Academic Integrity: Students have a responsibility to promote academic integrity at the University by not participating in or facilitating others’ participation in any act of academic dishonesty and by reporting all violations or suspected violations of the Academic Integrity Standard to their instructors.

The Honor Pledge: 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". Violations of the Academic Integrity Standard (academic violations) include, but are not limited to cheating, falsification, and plagiarism.

Plagiarism includes knowingly "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 the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials. The penalties for plagiarism are severe. They include warning or reprimand, grade adjustment, probation, suspension, expulsion, withholding of transcripts, denial or revocation of degrees, and referral to psychological counseling.

**XIV. 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) as early in the semester as possible (University Inn # 101, 435-797-2444, drc@usu.edu). All disability related accommodations must be approved by the DRC. Once approved, the DRC will coordinate with faculty to provide accommodations.

**XV. 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).