A Special Topics, Study Abroad Course

Conservation Realities in Northern Mexico

Desert Laboratory on Tumamoc Hill and locations in northern Mexico
July 6th to August 21st, 2020

6–9 units, RNR 495M/595M

Description of Course

Conservation Realities in Northern Mexico is a trans-disciplinary field course that will immerse students in the frontier of social and environmental research and conservation issues in the multicultural U.S.-Mexico borderlands. This course continues a distinguished history of offering cross-border field courses at the University of Arizona. Learning will be based in Tucson at the historic Desert Laboratory on Tumamoc Hill, and in the field in Northern Mexico in the remarkable islands of the Gulf of California and mountains and canyons of the Alamos region in southern Sonora. The program will leverage partnerships both across campus and with communities in Mexico to provide transformative learning opportunities for advanced undergraduate and graduate students. Specifically, the class follows a social and environmental curriculum that addresses on the ground conservation, focusing on three distinct geographic and cultural case studies. The first module will be based in the Midriff Islands of the Gulf of California in partnership with the indigenous Comcaac. The second will be based in the tropical dry forest and campesino communities of Álamos, Sonora region, partnering with Reserva Monte Mojino, a project of Nature and Culture International. We will end the course traversing Baja California from south to north learning from multiple coastal communities. The course is offered by the University of Arizona Study Abroad for University of Arizona course credit.

Course Prerequisites or Co-requisites

Completion of Spanish 101 or the equivalent.

Instructor and Contact Information

Dr. Benjamin T. Wilder, Director, Desert Laboratory on Tumamoc Hill
bwilder@email.arizona.edu
Office (campus): (520) 626-3987
ENR2 Building, room 542 (NE side)
Office Hours – to be decided

Website: https://global.arizona.edu/study-abroad/program/conservation-realities-northern-mexico
Course Overview

The class follows a social and environmental curriculum that addresses on-the-ground conservation, focusing on two distinct geographic and cultural case studies. The first module will be based in the Midriff Islands of the Gulf of California in partnership with the indigenous Comcaac and Prescott College Kino Bay Center. The second will be based in the tropical dry forest and campesino communities of Alamos, Sonora region, partnering with Reserva Monte Mojino, a project of Nature and Culture International. Teaching methods will be a mix of lectures, issue-based group discussions, anchored in experience-based learning through immersive site visits. Classroom sessions will include guest lectures from prominent scholars and conservation practitioners in the region.

The course will be based both in the unique classroom setting of the historic 1906 library at the Desert Laboratory on Tumamoc Hill and in remote field settings in the Gulf of California and Alamos, Sonora.

The general course schedule will be as follows (see detailed course schedule on pp. 8–9):

- **Week 1**, class session at Tumamoc meets MWF, 2:30–6:00 p.m.
  - Topics include a general social and biological introduction to the Sonoran Desert and a thorough study on the Comcaac and Gulf of California.
- **Weeks 2**: field expedition to the Gulf of California.
  - This trip coincides with the traditional New Year in the indigenous Comcaac (Seri) community we will be visiting.
- **Weeks 3–4**: field expedition to the Alamos region.
  - Visit the historic colonial town of Alamos, then journey to Reserva Monte Mojino’s field stations in the nearby mountains. At the Palo Injerto station, students will explore the river and canyons, and interact with local residents. We then journey by foot with mule support to the remote village of Santa Barbara.
- **Weeks 5–7**: field expedition to Baja California.
  - Focus on different models of marine protected areas and explore the climatic and biotic gradients along the 1,000 km long peninsula.

Students are expected to be respectful and adhere to cultural norms when in Mexico, which will be detailed by the instructor. Class discussion prior to departure will address the personal and ethical nuances of cross-cultural interaction.

Course Communications

Online communication will be conducted through official UA e-mail addresses and a course D2L site and box folders for the sharing of documents.

Required Texts or Readings

Required for each student to have their own copy:


Additional core texts, scanned copies of specific chapters will be provided:
Gulf of California:


Alamos region:


Additional readings will include various journal articles and book chapters, posted on D2L.

Course Location

When in Tucson the course will be held in the library at the historic Desert Laboratory on Tumamoc Hill (www.tumamoc.arizona.edu). Transportation to the lab is possible via a short 15-minute drive from campus to the lab buildings or by taking the streetcar to west end of the line at El Mercado and a short bike ride and walk up the Hill. The library, which houses over a hundred years of ecological research, and the historical resources of the Desert Lab are an integral to this course.

Course Objectives and Expected Learning Outcomes

The course addresses the roots of conservation challenges in the Sonoran Desert, taking a regional approach that immerses students in this unique environment, with local case studies in the Midriff Islands and Alamos, Sonora. Through the course, we aim to understand key drivers of environmental change, such as land-use change (e.g., buffelgrass conversion, game ranches, and land privatization, and sale), climate change (e.g., threat of mega-drought, species range shifts), water use (e.g., dam and aqueduct construction in the Sierra Madre, indigenous water rights), and biodiversity loss (e.g., local and permanent extinction, invasive species, assisted migration).

Throughout the course, students will learn to understand the region and issues discussed from multiple perspectives (academic, governmental, traditional ecological knowledge) and develop knowledge of the contexts underpinning changes in social and ecological landscapes through classroom and direct, personal experiences.

Specifically, upon completion of this course all students will:

1. Understand the historical and present influences on the biodiversity and cultures of the Sonoran Desert and Gulf of California.
2. Be able to analyze the challenges of conservation in northern Mexico and the U.S.-Mexico borderlands.
3. Develop an international perspective and understanding of conservation efforts.
4. Develop a comprehension of government and community-based approaches to emerging challenges.
5. Synthesize and convey ideas on the challenges to biological and cultural diversity.
Graduate students in the course will have the following additional learning outcomes:

1. Gain ability to prepare a professional research paper
2. Acquire leadership skills through organizing and leading a group project
3. Collate and edit reports generated by students to create a regional field guide

Assessment of Student Learning

Students are required to participate in both field outings and maintain a minimum of 90% attendance while in Tucson. Students will maintain a daily journal/field notebook in the format specified by the instructor. As a tool to guide discussion and learning experiences, students will periodically be given reflection questions to guide journal entries. Students will be expected to share their thoughts and answers to these questions during discussions. Students will turn in an electronic (scanned) copy of the field notebook at designated dates for review and at the end of the course. Much of the class will be discussion-based, and students will be evaluated on their active engagement and participation in class discussions and lectures.

Two mid-term exams will be given.

Students will complete a research paper. Each student will identify a general topic by the second week of the course (e.g. indigenous rights, water law, species conservation, conservation frameworks, etc.), develop a general review of the issue, and present a specific area of focus for the research paper in week six. The final paper, 7–10 pages, plus references (1.5-line space, 12 pt. Times New Roman), will be due at the end of the course.

Assessment will also be based on the following activities:

- “Resident Expert.” Each student will choose a species or topic on which to become the class expert. The student will read at least five papers on this topic and write a 2-page overview of the subject. While in the field, each student will give a presentation on their topic, and will be expected to share their knowledge when the topic comes up in the field (e.g. if a student has chosen cetaceans, they will share with the group if and when we see dolphins or whales).

- Group Project. Students will work on group projects that cross disciplinary lines in addressing a research question. A goal of the course is to directly contribute to the knowledge base of the region via the execution of two long-term research projects, one in each field site. Each student will be asked to participate as a team member in data collection, archiving, and analysis. Details of the projects will be provided on D2L, and discussed in class.

Graduate students in the course will have the following additional requirements:

1. Research paper: Graduate student research papers will focus on a research topic that is in direct relation to their Masters or PhD work. It will be prepared in the style of paper formatted for publication in a peer-reviewed journal as agreed upon by the instructor.

2. Group project: Graduate students are expected to assume leadership roles in the two group research projects by serving a key organizing role in data analysis, and in general throughout the field expeditions.

3. Resident Expert field guide: In addition to serving as a resident expert on a particular subject, graduate students will assemble the individual student resident expert reports into a field guide to be of general use to other students and for other visitors to these regions.
Assignments and Examinations

<table>
<thead>
<tr>
<th>Undergraduate</th>
<th>Graduate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation – 150 points</td>
<td>Participation – 100 points</td>
</tr>
<tr>
<td>Resident Expert – 100 points</td>
<td>Resident Expert (incl. field guide) – 125 points</td>
</tr>
<tr>
<td>Group Project – 150 points (75 pts. each)</td>
<td>Group Project – 175 points</td>
</tr>
<tr>
<td>Exams – 150 points (75 pts. each)</td>
<td>Exams – 150 points (75 points each)</td>
</tr>
<tr>
<td>Research Paper – 300 points</td>
<td>Research Paper – 300 points</td>
</tr>
<tr>
<td>Field Notebook – 150 points</td>
<td>Field Notebook – 150 points</td>
</tr>
</tbody>
</table>

1,000 total points

See schedule on pp. 8–9 for due dates.

Grading Scale and Policies

**Common Grading Scale for Undergraduate and Graduate Students**

A = (total ≥ 90%) Outstanding achievement that demonstrates superior mastery of the material and exemplary performance on both tests and written exercises. The distinction between A and B will depend on the student’s ability to understand and articulate explicit and implicit concepts.

B = (total 80–89%) Achievement that significantly exceeds level necessary to meet course requirements.

C = (total 70–79%) Achievement that meets all course requirements at an average level.

D = (total 60–69%) Achievement worthy of credit, but unsatisfactorily meets the course requirements.

E = (total<60%) Failure to complete the course requirements at a level worthy of credit.

**Requests for incomplete (I) or withdrawal (W)** must be made in accordance with University policies, which are available at [http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete](http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete) and [http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal](http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal) respectively.

**Dispute of Grade Policy**

If a grade is disputed on a paper, project, or exam, this must be done so with the instructor within a week of the student receiving the graded item.

**Honors Credit**

Students wishing to contract this course for Honors Credit should email the instructor to set up an appointment to discuss the terms of the contract. Information on Honors Contracts can be found at [http://www.honors.arizona.edu](http://www.honors.arizona.edu).

**Makeup Policy for Students Who Register Late**

Students who register after the first class meeting may make up missed assignments/quizzes before the end of the fifth class meeting and must meet with the instructor to establish a plan to do so.

**Required or Special Materials**
No special tools for the classroom sessions will be needed. Students will need camping gear for the field portions of the course. Dr. Wilder has most of this equipment, though rental of sleeping bags if not owned by the student will be required.

**Required Extracurricular Activities**

The course has two extensive field components. One in the Gulf of California (14 days) and the other in the Alamos region of southern Mexico (15 days). Students are required to participate in both trips. Conditions will be remote and rugged. Excursions will be undertaken on land and at sea. Due to the remoteness of some areas, students should be physically fit and prepared for the unpredictable nature of field research in remote areas with limited infrastructure. Students will be living and working as close group and will be expected to work as a team. The course will be camping and spending the majority of the days outside in the heat of the Sonoran Desert summer. Students are stressed to prepare mentally and physically for the challenging, yet rewarding, context of the course.

In addition, Study Abroad advises each student on immigration related issues taking into consideration their personal profile. Generally, Study Abroad is unable to provide direct visa advice but can point the student in the direction of available resources. If there is an international student, Study Abroad will work closely with International Student Services to make sure that the student is adequately prepared with their Travel Signatures, etc. before studying abroad.

Unfortunately, at present, Study Abroad is advising that DACA students do not participate on study abroad programs/go abroad given the current political situation in the United States.

**Student Costs**

Students will pay a program fee (ca. $5,750 with 10 participating students), which is customized for this specific course and includes all aspects of excursions and field trips in the Gulf islands and the Alamos area including hotels, food, insurance, faculty costs, visiting lecturer costs, and on-the-ground transportation. A detailed budget is available upon request to Dr. Wilder. The only additional cost a student would need to cover is room and board while the course is in Tucson and camping gear for field excursions (sleeping bag and back pack; tents and kitchen supplies are available). Students will register through study abroad and earn the direct credit with SNRE in addition to being registered in the Study Abroad system.

**Absence and Class Participation Policy**

The UA’s policy concerning Class Attendance, Participation, and Administrative Drops is available at: [http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop](http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop)

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, [http://policy.arizona.edu/human-resources/religious-accommodation-policy](http://policy.arizona.edu/human-resources/religious-accommodation-policy).

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: [https://deanofstudents.arizona.edu/absences](https://deanofstudents.arizona.edu/absences)

Participating in the course and attending lectures and other course events are vital to the learning process. As such, attendance is required at at least 90% of lectures when the course is in Tucson and both field outings. Students who miss class due to illness or emergency are required to bring documentation from their health-care provider or other relevant, professional third parties. Failure to submit third-party documentation will result in unexcused absences and zero points for participation.
Classroom Behavior Policy

To foster a positive learning environment, students and instructors have a shared responsibility. We want a safe, welcoming, and inclusive environment where all of us feel comfortable with each other and where we can challenge ourselves to succeed. To that end, our focus is on the tasks at hand and not on extraneous activities (e.g., texting, chatting, reading a newspaper, making phone calls, web surfing, etc.).

Students are asked to refrain from disruptive conversations with people sitting around them during lecture. Students observed engaging in disruptive activity will be asked to cease this behavior. Those who continue to disrupt the class will be asked to leave lecture or discussion and may be reported to the Dean of Students.

Part of the thrill of going abroad is being immersed in a new culture. Every culture has its own cultural norms and social protocols. As you go abroad and your socio-cultural environment changes, your conduct should change as well. Make the effort to adjust to your new environment and adapt many of the behavioral norms of your new home.

Your new home will have its own unique set of laws. Be aware of what is legally acceptable abroad and remember that all UA study abroad students are subject to the laws of their host country. Additionally, all students abroad on UA programs are expected to abide by the UA Code of Conduct and the UA Code of Academic Integrity. Disciplinary action can be taken by the UA Dean of Students Office against students abroad.

Threatening Behavior Policy

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students.

Accessibility and Accommodations

At the University of Arizona we strive to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, you are welcome to let me know so that we can discuss options. You are also encouraged to contact Disability Resources (520-621-3268) to explore reasonable accommodation.

If our class meets at a campus location: Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

Code of Academic Integrity

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See: http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity.

The University Libraries have some excellent tips for avoiding plagiarism, available at http://new.library.arizona.edu/research/citing/plagiarism.

UA Nondiscrimination and Anti-harassment Policy

The University is committed to creating and maintaining an environment free of discrimination; see http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy.
Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We also want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others.

**Additional Resources for Students**

UA Academic policies and procedures are available at [http://catalog.arizona.edu/policies](http://catalog.arizona.edu/policies)

Student Assistance and Advocacy information is available at [http://deanofstudents.arizona.edu/student-assistance/students/student-assistance](http://deanofstudents.arizona.edu/student-assistance/students/student-assistance)

**Confidentiality of Student Records**


**Subject to Change Statement**

Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.

**Scheduled Topics/Activities**

<table>
<thead>
<tr>
<th>Week</th>
<th>Focus</th>
<th>Location</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Classroom Session:</strong> July 6th to July 12th</td>
<td>1 week, 3 sessions, 3 ½ hours each; M, W, F</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 1 | Intro to Sonoran Desert, the Comcaac, and Gulf of California | Desert Laboratory | **Field Notebook:** Reflection question 1  
**Research Paper:** General topic selection, due mid-week.  
**Trip Preparation:** Prepare for field time for rest of course |

**Field Expedition 1:** The Comcaac and Gulf of California; July 13th to July 18th; 6 days, 6 hours of contact a day.

| 2 | Base at Desemboque with the Comcaac | Desemboque, Sonora | **Group Project 1:** Punta Cirio  
**Field Notebook:** Reflection question 2 and Check 2 in middle of trip |

**Field Expedition 2:** Alamos and the Reserva Monte Mojino; July 19th to August 1st  
14 days, 6 hours of contact a day

| 8 & 9 | Alamos and camping in the Reserva Monte Mojino | Alamos, Sabanito Sur, Santa Barbara | **Field Notebook:** Reflection questions 3  
**Research Paper:** Specific topic selection abstract and outline, and draft  
**Exam 1:** Covering material thus far  
**Group Project 2:** Sabanito Sur and Santa Barabra |

**Field Expedition 3:** Baja California; August 2nd to August 21st
<table>
<thead>
<tr>
<th>20 days, 6 hours of contact a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
</tr>
</tbody>
</table>