

ESP 410: ESP-ILM Capstone (Fall 2023)

Location/Time: Eggers Hall 070 Mondays 9:30 am – 12:15 pm		
Instructors:	Dr. Chie Sakakibara	Dr. Melissa Chipman
Dept:	Geography & the Environment / Native American & Indigenous Studies	Earth and Environmental Sciences / Native American & Indigenous Studies
Office:	144D Eggers Hall	317B Heroy Geology Building
Office hours:	By appointment only	By appointment only
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Research Focus	Environmental humanities and Indigenous resilience to climate change	Paleoecological reconstructions of climate and environmental change

Course Description:

- This is the capstone course for students in the Environment, Sustainability, and Policy Integrated Learning Major (ESP-ILM). **This course is designed for senior students to investigate topics by integrating perspectives from the natural sciences, social sciences, and humanities.**
- The overall learning goal of this course is **prepare students to enter the fields of policy, environmental science, environmental humanities, and/or sustainability.** There is a heavy focus on sharing skills, tools, and perspectives to develop a high-quality environmental assessment and present research results in a public setting.

Additional Course Description:

- This course will **synthesize the major concepts and skills of the ESP-ILM.** We will explore environmental sustainability by highlighting the methodologies, perspectives, and current issues in both the natural sciences and environmental humanities.
- Students will work together and independently to **produce a high-quality poster and final report** on a current, pressing issue related to environmental sustainability. Students will:
 - Choose a topic that they will work on throughout the semester
 - Work together as a team to share data, tools, and perspectives
 - Prepare a report as part of an anthology on environmental change and cultural resilience
 - Present their individual research at a symposium
- Each week will include a **1 hour lecture and discussion on an example environmental topic,** designed to integrate the perspectives of Western and Indigenous scientists, illustrate how these issues are currently impacting policy decisions and sustainability goals in the United States, and provide tools for students to gather data and explore issues related to their chosen topic.
- After each lecture, there will be **2 hours of focused group work** for students to incorporate those perspectives into their final semester project and receive feedback from the instructors.

Prerequisite: None

Audience: Undergraduate majors in the ESP-ILM

Credits: 3

Required Texts / Supplies: All readings will be supplied by the instructors.

Learning Objectives:

After taking this course, students will be able to:

- Cohesively work in a diverse team setting to critically assess environmental issues
- Integrate scientific datasets and humanistic perspectives to explore an environmental issue
- Develop sustainable solutions to environmental issues that are place-based and equitable
- Produce a high-quality environmental assessment report
- Present environmental sustainability research in a formal setting to a diverse audience

Course Requirements and Expectations:

Blackboard: Class readings, project materials, and other course business will be posted on Blackboard for this class. **You are responsible for checking the site regularly to access course materials.** Any mailings regarding this course will be sent to your Syracuse email addresses, not to private accounts.

Lectures/Discussions/Readings: Pre-lecture readings will be assigned each week, and students may be asked to turn in a short reading reflection before class to help facilitate discussion. All lectures are in person. Guest speakers (via Zoom) should be treated respectfully, and students are expected to engage with the speakers and ask questions. The guest speakers will be invited to Syracuse University in person to attend the Ray Smith Symposium in the Humanities on November 12-13, 2023 (see more information on this symposium and your expected involvement in the event below).

Group Work and Weekly Assignments: All students are expected to attend class and participate in focused group work with their team to make progress semester projects. These sessions are designed for students with unique perspectives to share their knowledge and skills to the benefit of others in their team. Producing an environmental assessment in the professional world requires collaborative work, and that is the setting we will be working in for the final projects. Although students will work together during the focused group meetings to share ideas and tools, **students will be graded individually for their contributions.** All students are expected to treat others with respect and collegiality.

Semester Project: Students will work in teams of two or three to produce an environmental assessment report that integrates scientific datasets and humanistic perspectives. Students will choose a team and identify a topic in the first course meeting to work on throughout the semester. Topics must be approved by both instructors. A rubric and examples will be provided.

The environmental assessment report should be geared towards the general public to inform them about the environmental issue (scientific perspective), assess social impacts of the issue (humanistic perspective), and offer ideas for equitable and place-based solutions (sustainability perspective). The report should be high quality and include informative figures and graphics, clear and coherent subsections, and references. The report will have three main parts:

1. **Define the environmental issue.** Collate datasets that explain the issue, and create graphs, maps, and/or figures that clearly explain the causes and consequences of the issues. What are the drivers (Climate change? Human land-use? Other?). What are the impacts on the natural environment (biodiversity, pollution, water resources, etc).
2. **Explore the impacts of the issue on community members.** Define the sociopolitical setting of the region. Who is impacted by the issue and how? What are the values and goals of the community members and where do they differ and coincide? What is the political landscape and how does this impact the potential solutions?
3. **Suggest solutions for environmental sustainability.** What is achievable/possible? What types of investments are needed to make the solutions successful?

Poster Presentation: Each student will generate a poster summarizing the preliminary results of their report, and will receive feedback to help finalize their semester project. Students will present their posters at the Ray Smith symposium (November 12-13, 2023). This is an event that is open to the public and will include the invited speakers. All students are expected to attend and contribute to this event (see below).

Ray Smith Symposium in the Humanities: The goal of this symposium is to explore the means and ends of climate policy and solutions by bridging humanistic thinking, geoscience, mainstream social science, and Indigenous epistemologies about the environment. The symposium will thoroughly explore the human dimensions of environmental change as well as will bring Indigenous environmental struggles into conversation. The symposium is free and open to the public and will convene on the SU Campus. The dates of the symposium are November 12-13, 2023 and includes presentations by invited speakers and a panel discussion among them and the audience. The symposium will also include a student poster fair, museum visit, and an evening performance featuring an Alaska Native performance artist. All students in this class are expected to attend this event. Schedule below.

Ray Smith Symposium in the Humanities
Indigenous Resilience, Climate Change, and the Environmental Humanities
tentative schedule, subject to modification before event

Sunday, Nov 12

Location: Hall of Languages 107
 1:00-1:30: Welcome Remarks & Introduction of Symposium Speakers
 1:30-4:30: Talks by invited speakers

Location: Skybarn
 5:00-7:00 pm: Dinner and performance by Allison Akootchook Warden
 (Aku-Matu; Iñupiaq; Native Village of Kaktovik, Alaska)

Monday, Nov 13

Location: Eggers 220
 9:00-9:30: Coffee and Pastries
 9:30-11:00: Student Poster Session
 11:00-3:00: Talks by invited speakers (lunch included)
 3:00-4:00: Panel Discussion with all speakers

Location: Syracuse Art Museum
 4:00-5:00: Tour of the exhibition “Continuity, Innovation, and Resistance: The Art of Peter Jones”
 curated by Sascha Scott and Scott Manning Stevens

Grading: All grades will be posted in Blackboard

- Discussion participation 15%
- Group work and weekly assignments 25%
- Poster presentation 30%
- Final report 30%

Grade	Percentage Range
A	93% and above
A-	90-92%
B+	87-89%
B	83-86%
B-	80-82%
C+	77-79%
C	73-76%
C-	70-72%
D	60-69%
F	59% and below

Course Specific Policies:

- **LECTURE:** You are expected to attend all class meetings during the regularly scheduled time. If you miss class, you will be responsible for catching up on material on your own.
- **GROUP WORK:** The second part of each class meeting will be a team exercise with a snapshot of progress turned in at the end of each class. If you are absent or do not contribute during class time, you will receive a zero. Students should bring laptops to facilitate work on their projects.
- **FINAL PRESENTATIONS AND PROJECTS:** All students are required to produce a poster and present it in November. Extensions on the due dates of the final project will only be given in documented, exceptional circumstances. Documentation is required. Final reports are due on December 18th.
- **Zoom Link for Guest Speakers:**
<https://syracuseuniversity.zoom.us/j/97237923417?pwd=eS85bHZSWXRJRWRDTEJFaG9FY3RWUT09>

Course Schedule:

Theme	Date	Pre-class Readings	Lecture/Discussion	Group Activity ** = please bring laptops
Introduction to the Course	28-Aug	Tonino (2016) Bioneers (2014) Adams et al. (2021)	How can we integrate environmental science and environmental humanities?	**Define a research topic, determine the goals of the assessment, and sketch a broad outline
Biodiversity, Conservation, and Land Management	11-Sep	Mace (2014) Jessen et al. (2021)	Scientific perspectives on the preservation of biodiversity	**Characterize attributes of your study system using online databases
	18-Sep	Gordon et al. (2023) Alfred (2006) Perreault et al. (2012)	Indigenous land management and the importance of sovereignty	**Research orientation by Winn Wasson, SU Libraries
	25-Sep	Guest speaker: Ali Meders-Knight		Q and A
Global Warming and Environmental Feedbacks	2-Oct	Kelly et al. (2020) Sletto (2009) Larson et al. (2020)	How are global fire regimes changing and why is it important? What is the role of Indigenous TEK in fire management?	**Explore both scientific and humanistic perspectives on your environmental issue from multiple sources
	9-Oct	SU Fall Break - No Class		
	16-Oct	Guest Speaker: Dr. Christopher Roos		Q and A
Disparity in the Impacts of Climate Change	23-Oct	IPCC (2022) video Constable et al. (2022)	Spatial variability in the impacts of global warming: Climate extremes and Arctic Amplification	**Define community stakeholders and discuss how environmental impacts affect groups differently
	30-Oct	Rathwell (2020)	*Meet at SU Art Museum Impact of warming on Arctic peoples and Indigenous resilience	Tour of Peter B. Jones exhibition Object-based learning and discussion (Print Study Room)
	6-Nov	Guest Speakers: Linda Infante Lyons & Rosemary Ahtuanguaruak		Q and A
Symposium	12 & 13 Nov	Ray Smith Symposium: Indigenous Resilience, Climate Change, and the Environmental Humanities		Team poster presentations
Environmental Change and Shared Resources	27-Nov	A well-earned day off 😊		
	4-Dec	Megadrought Articles Kimmerer (2016)	Climate impacts on water availability and water rights in the American Southwest	**Explore impacts on natural resources, people, and perceptions and offer potential solutions/synergies
	11-Dec	Guest speaker: Edward Hummingbird		Q and A
Final Reports	18-Dec	Final Reports Due		

University Attendance Policy

Attendance in classes is expected in all courses at Syracuse University. Students are expected to arrive on campus (or be online) in time to attend the first meeting of all classes for which they are registered. Students who do not attend classes starting with the first scheduled meeting may be academically withdrawn as not making progress toward degree by failure to attend. Instructors set course-specific policies for absences from scheduled class meetings in their syllabi. It is a federal requirement that students who do not attend or cease to attend a class to be reported at the time of determination by the faculty. Faculty will use Orange Success to alert the Office of the Registrar and the Office of Financial Aid. A grade of NA is posted to any student for whom the Never Attended flag is raised in Orange SSuccess. More information regarding Orange SSuccess can be found here, at <http://orangesuccess.syr.edu/getting-started-2/>.

Syracuse University Policies

Religious Observances Notification and Policy: Steps to follow to request accommodations for the observance of religious holidays can be found at: http://supolicies.syr.edu/studs/religious_observance.htm

Orange Success: Tools to access a variety of SU resources, including ways to communicate with advisors and faculty members can be found at: <http://orangesuccess.syr.edu/getting-started-2/>

Diversity and Disability The rights and responsibilities of students in a diverse, inclusive, accessible, bias-free campus can be found at: <https://www.syracuse.edu/life/accessibilitydiversity/>.

Disability-Related Accommodations: Syracuse University values diversity and inclusion; we are committed to a climate of mutual respect and full participation. There may be aspects of the instruction or design of this course that result in barriers to your inclusion and full participation in this course. I invite any student to meet with me to discuss strategies and/or accommodations (academic adjustments) that may be essential to your success and to collaborate with the Office of Disability Services (ODS) in this process. If you would like to discuss disability-accommodations or register with ODS, please visit their website at: <http://disabilityservices.syr.edu>. Please call (315) 443-4498 or email disabilityservices@syr.edu for more detailed information. ODS is responsible for coordinating disability-related academic accommodations and will work with the student to develop an access plan. Since academic accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible to begin this process.

Academic Integrity Policy: Syracuse University's Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy holds students accountable for the integrity of all work they submit and for upholding course-specific, as well as university-wide, academic integrity expectations. The policy governs citation and use of sources, the integrity of work submitted in exams and assignments, and truthfulness in all academic matters, including course attendance and participation. The policy also prohibits students from: 1) submitting the same work in more than one class without receiving advance written authorization from both instructors and, 2) using websites that charge fees or require uploading of course materials to obtain exam solutions or assignments completed by others and present the work as their own. Under the policy, instructors who seek to penalize a student for a suspected violation must first report the violation to the Center for Learning and Student Success (CLASS). Students may not drop or withdraw from courses in which they face a suspected violation. Instructors must wait to assign a final course grade until a suspected violation is reviewed and upheld or overturned. Upholding Academic Integrity includes abiding by instructors' individual course expectations, which may include the protection of their intellectual property.

Students should not upload, distribute, or otherwise share instructors' course materials without permission. Students found in violation of the policy are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered, as described in the Violation and Sanction Classification Rubric. Students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice.