

## **Environmental Research Methods and Ethics** ENVI-3500 (3 credits)

### **Portugal: Sustainability and Environmental Justice**

*This syllabus is representative of a typical semester. Because courses develop and change over time to take advantage of unique learning opportunities, actual course content varies from semester to semester.*

#### **Course Description**

The Environmental Research Methods and Ethics (ERME) seminar introduces students to the conceptual and practical tools for gathering primary data and the knowledge and skills that are essential to forming constructive relationships with organizations and/or individuals, which are necessary for completing an academic project in the cultural context of Portugal. The main emphasis is on the development of empirical tools and ethics of interactive research skills involving the collection of primary data. The seminar includes modules on sustainability research methods and qualitative and quantitative research methods for ethical decision making in environmental studies. The seminar uses lectures and field assignments to prepare students to undertake field study in the cultural context of Portugal in strict observance of research procedures. The overall aim is to help students hone their experience-based learning processes and prepare them for the development of an Independent Study Project (ISP), which is largely based on the data gathered from primary sources.

#### **Learning Outcomes**

Upon completion of the course, students will be able to:

- Articulate their own positionality and operate independently, using cultural sensitivity, and local networks of trust built over the course of the semester;
- Design appropriate quantitative and/or qualitative methods and ethics for field research in sustainability and environmental studies;
- Apply comparative methods of research in sustainability and environmental studies;
- Analyze and process primary data gathered in the field and draw valid and ethical interpretations and conclusions;
- Integrate review of sample relevant literature, an outline of method, and anticipated ethical challenges and ways of addressing them to design an Independent Study Project proposal.

#### **Language of Instruction**

This seminar is conducted in English, but students will be exposed to vocabulary related to seminar content through in-country expert lectures and field visits in a wide range of venues.

## **Instructional Methods**

SIT's teaching and learning philosophy is grounded in the experiential learning theory developed by Kolb (1984; 2015) and informed by various scholars, such as Dewey, Piaget, Lewin, among others. Experiential learning theory recognizes that learning is an active process that is not confined to the formal curriculum; "knowledge is created through the transformation of experience" (Kolb, 2015, p. 49). Learning involves both content and process. Learning is holistic and happens through various life experiences upon which students draw to generate new ways of knowing and being. Learning involves a community and is a lifelong endeavor. Learning is transformational. The suggested four step-cycle of a *concrete experience, reflective observation, abstract conceptualization, and active experimentation* embedded in the experiential learning model is not linear and might not always happen in that specific order, as any learning is highly context dependent. These stages of taking part in a shared experience; reflecting on that experience by describing and interpreting it; challenging their own assumptions and beliefs to generate new knowledge; and ultimately applying new knowledge, awareness, skills, and attitudes in a variety of situations and contexts are important for students to engage in to become empowered lifelong learners.

## **Assignments and Evaluation**

### Assignment Descriptions and Grading Criteria

#### 1) Voluntary Services (15%)

Students are asked to conduct voluntary work together with Portuguese institutions and communities. In the voluntary activities, students are asked to observe and explore the benefits of working in a context with different social classes, gender, and race and understand how their voluntary services affected the community or the ecosystems. Students are encouraged to talk to their peers in the different environments and understand the Portuguese volunteers' work and thoughts into the social context and ethics in Portugal. After these experiences, students are asked to write a small reflection paper (2-3 pages) about their activities as volunteers in a Portuguese context environment.

#### 2) Group Podcast (15%)

During the semester students will be studying different research methods that they will use during their ISP period. This exercise is designed for students to apply many of these methods and ethics before going into the field to do their research project. The outcome of this exercise should be the elaboration of a Group Podcast where they should show creatively the use and understanding of what has been learned in class and excursions during the entire program.

#### 3) Field Work Journal (20%)

Students are expected to keep a work journal where they will document thoroughly all the activities and assignments carried out during the course and program. This will also continue during the Independent Study Project period. The work journal is submitted for review and evaluation two times during the semester.

#### 4) Independent Study Project (ISP) Research Proposal (40%)

All students must develop a research proposal. The research proposal should address a theme related to the program, include research question and objectives, theoretical framework, methodology, and comply with the ethical standards learned throughout the course.

#### 5) Participation (10%)

This includes active involvement in lectures, readings, discussions, and excursions using the following criteria:

- Attendance - promptness to class and positive presence in class.
- Active Listening - paying attention in class and during field excursions, asking appropriate questions, showing interest and enthusiasm (this includes body language), entertaining contradictory perspectives, taking notes.
- Involvement in Class Discussions - either in small or large groups, sharing knowledge. This means challenging yourself to speak up if you usually don't, and also means allowing others to speak if you are a person who tends to dominate class discussions.
- Group Accountability – positive participation in the group during field excursions and classes; not keeping others waiting.
- Displaying Respect – culturally appropriate interaction with hosts, SIT program staff, SIT lecturers and communities.

#### Assessment

Voluntary Services – 15%

Group Podcast – 15%

Field Work Journal – 20%

Independent Study Project (ISP) Research Proposal – 40%

Participation - 10%

#### Attendance and Participation

Due to the nature of SIT Study Abroad programs, and the importance of student and instructor contributions in each and every class session, attendance at all classes and for all program excursions is required. Criteria for evaluation of student performance include attendance and participation in program activities. Students must fully participate in all program components and courses. Students may not voluntarily opt out of required program activities. Valid reasons for absence must be notified in advance when possible and be discussed with the academic director or other designated staff person. Absences impact academic performance, may impact grades, and could result in dismissal from the program.

#### Late Assignments

SIT Study Abroad programs integrate traditional classroom lectures and discussion with field-based experiences, site visits and debriefs. The curriculum is designed to build on itself and progress to the culmination (projects, ISP, case studies, internship, etc.). It is critical that students complete assignments in a timely manner to continue to benefit from the sequences in assignments, reflections and experiences throughout the program.

Example: Students may request a justified extension for one paper/assignment during the semester. Requests must be made in writing and at least 12 hours before the posted due date and time. If reason for request is accepted, an extension of up to one week may be granted at

that time. Any further requests for extensions will not be granted. Students who fail to submit the assignment within the extension period will receive an 'F' for the assignment.

### Grading Scale

94-100%	A
90-93%	A-
87-89%	B+
84-86%	B
80-83%	B-
77-79%	C+
74-76%	C
70-73%	C-
67-69%	D+
64-66%	D
below 64	F

### **Program Expectations**

- Show up prepared. Be on time, have your readings completed and points in mind for discussion or clarification. Complying with these elements raises the level of class discussion for everyone.
- Have assignments completed on schedule, printed, and done accordingly to the specified requirements. This will help ensure that your assignments are returned in a timely manner.
- Ask questions in class. Engage the lecturer. These are often very busy professionals who are doing us an honor by coming to speak.
- Comply with academic integrity policies (no plagiarism or cheating, nothing unethical).
- Respect differences of opinion (classmates', lecturers, local constituents engaged with on the visits). You are not expected to agree with everything you hear, but you are expected to listen across difference and consider other perspectives with respect.
- Storing Your Work: Keep several copies of your work as back up and keep one copy accessible to you through an online forum, such as an attachment in your email, the course learning management system, or cloud-based storage. This way your work will always be available to despite technical issues. Lost files, deleted drives, or computer crashes are not excuses for late, missing work.
- Personal Technology Use: Cell phones and other personal electronics can be used for taking notes and other class activities. Off-task usage is not acceptable. You may be marked as absent for habitually using them for something other than classroom activities.
- Course Communication: Course documents and assignments will be posted. Although the course calendar provides a broad overview and the general sequence of work and assignments for the course, what we accomplish in class will vary, and revisions to the calendar will be posted at the course site. You will need to check the course site regularly. You are responsible for letting me know about any network-related problems that prevent you from accessing or submitting assignments.

- **Content Considerations:** Some texts and activities you will encounter in this course delve into sensitive topics that may be emotionally and intellectually challenging. Our classroom is a space where we can engage with challenging ideas, question assumptions, and navigate difficult topics with respect and maturity. As possible, flag content and activities that are especially graphic or intense may be shared. If you are struggling to keep up with the work or participate in the course because of the nature of the content and activities, you should speak with the academic director and/or seek help from counseling services.
- **Classroom recording policy:** To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student's own private use.

### **SIT Policies and Resources**

Please refer to the [SIT Study Abroad Handbook](#) and the [Policies](#) section of the SIT website for all academic and student affairs policies. Students are accountable for complying with all published policies. Of particular relevance to this course are the policies regarding: academic integrity, Family Educational Rights and Privacy Act (FERPA), research and ethics in field study and internships, late assignments, academic status, academic appeals, diversity and disability, sexual harassment and misconduct, and the student code of conduct.

Please refer to the SIT Study Abroad Handbook and SIT website for information on important resources and services provided through our central administration in Vermont, such as [Library resources and research support](#), [Disability Services](#), [Counseling Services](#), [Title IX information](#), and [Equity, Diversity, and Inclusion](#) resources.

### **Course Schedule**

Please be aware that topics and excursions may vary to take advantage of any emerging events, to accommodate changes in our lecturers' availability, and to respect any changes that would affect student safety. Students will be notified if this occurs

### **Module 1: Experiential Learning and Positionality in Field-Based Research**

This introductory module is designed to introduce students to field-based research in a study abroad context. Students learn how to relate to local communities and individuals. Most particularly, this module allows students to discover the power of experiential learning and use it as a tool to connect to local communities and individuals and develop into reflexive researchers who are attentive to their own positionality in relation to the local communities in which they engage for their research.

Sessions and class discussions may include:

- Cultural adjustment cycle;
- Experiential learning philosophy and the politics of culture in Portugal;
- Positionality and outsider/insider research.

- How innovation development and progress was affected by dictatorship memories

*Required Readings:*

Da Silva, R. and Ferreira, A. S. (2018). The post-dictatorship memory politics in Portugal which erased political violence from the collective memory. *Integrative Psychological and Behavioral Science*. Available: <https://doi.org/10.1007/s12124-018-9452-8>

## **Module 2: Methods for Successful Researchers**

This module focuses on the tools, skills and methods required for conducting an outstanding Scientific field research in sustainability.

Sessions and class discussions in this module may include:

- *Time management and good work practices*
- Scientific writing
- *Science communication*
- *The importance of references in science: Data collection*
- *Research in Portugal*

*Required Readings:*

Scientific Communication – Scitable by Nature.com -

<https://www.nature.com/scitable/topic/scientific-communication-14121566/>

William Strunk, Jr. and E. B. White, *The Elements of Style* 4th edition (1999)

Longman Publishers [1st edition (1959) available online]

<https://www.crockford.com/style.html>

*Recommended Readings:*

David Lindsay (2020). *Scientific Writing = Thinking in Words*. Csiro Publishing.

Catherine de Lange, “How to communicate your work through stories”,

<http://blogs.nature.com/naturejobs/2013/02/17/how-to-communicate-your-work-through-stories>

Clinical chemistry guide to scientific writing - <https://www.aacc.org/science-and-research/clinical-chemistry/clinical-chemistry%C2%A0guide-to-scientific-writing>

Scientific writing booklet (online) -

<https://cbc.arizona.edu/sites/cbc.arizona.edu/files/marc/Sci-Writing.pdf>

## **Module 3: Research Methods for Environmental Studies**

This module focuses on the tools of methods of research in environmental studies.

Students learn from experts in the field skills to conduct human-centered approach to environmental issues. The module also includes discussions on the ethics of environmental research.

Sessions and class discussions in the module may include:

- Ethical issues that influence decision making in environmental research
- Quantitative and Quantitative - methods and analysis
- Statistical analysis
- Cost-benefit analysis
- Life Cycle Assessment
- SWOT and TWOS matrix
- Porter's Five Forces
- Business Model Canvas

*Required Reading:*

Kanazawa, Mark. (2018). *Research Methods for Environmental Studies: A Social Science Approach*. New York: Routledge.

Hartz-Karp, J. and Marinova, D. (Eds.) (2017). *Methods for Sustainability Research*. Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing.

Erechtchoukova, M., Khaiteer, P., and Golinska, P. (Eds.). (2013). *Sustainability Appraisal: Quantitative Methods and Mathematical Techniques for Environmental Performance Evaluation*. Heidelberg: Springer.

*Recommended Readings:*

Klandermans, B., Staggenborg, S., & Tarrow, S. (2002). *Methods of Social Movements Research* (Vol. 16). University of Minnesota Press.

Mahoney, J. (2007). Qualitative methodology and comparative politics. *Comparative Political Studies*, 40(2), 122-144. Accessed at: <http://cps.sagepub.com/cgi/content/abstract/40/2/122>

Coomans, F., Grunfeld, F. and Kamminga, M. (Eds.). (2009) *Methods of Human Rights Research*. Antwerp, Oxford and Portland: Intersentia.

Coffey, A.; Atkinson, P. (1996). Making sense of qualitative analysis. Sage Publication

Ragin, C. C. (2014). *The Comparative Methods: Moving Beyond Qualitative and Quantitative Strategies*. Oakland: University of California Press, 34 – 53.

Della Porta, D. (2008). 11 Comparative analysis: case-oriented versus variable-oriented research. *Approaches and methodologies in the social sciences*, 198. Accessed at:

<http://www.socpol.unimi.it/corsi/compol/corso/Della%20Porta%20%20Case%20Oriented%20vs%20variable%20oriented%202008.pdf>

Gillham, B. (2000). Case Study Research Method. Bill Gillham

#### **Module 4: Project Proposal Development**

Based on learning and engagement in the preceding course modules, this module focuses on ISP proposal development and guiding students through the development of the Human Subjects Review (HSR) application for review by the SIT Study Abroad Review Board (SARB). This critical phase in the course involves both large student group meetings and individual student meetings with the academic director and the ISP advisor.

Sessions and class discussions may include:

- Writing an ISP proposal;
- Peer review of ISP proposal drafts;
- Writing the HSR application and ethics for research;
- ISP proposal presentation to peers and roundtable discussion.

### **Module 5: ISP in the Context of Portugal**

This module prepares the student for the ISP experience. It examines work-based norms and practices related to conducting research in Portugal. The module highlights the importance of applied methodology in the ISP experience and the expectations and responsibilities of the student.

#### Session 1: Preparing for the ISP

This introductory session prepares the student for the ISP. The session covers a range of areas that include how to approach and develop rapport with research participants, how to work collaboratively with the ISP advisor, and logistics of the ISP period, including travel, materials, and timelines. Students will also review the ISP assessment rubric.

#### Session 2: Work-Based Norms and Practices in Portugal

This session explores work-based norms and practices related to research in Portugal exploring such issues as how best to describe the ISP to potential research participants and others, gender norms, issues of language, and expectations for behavior while conducting research.

#### Session 3: ISP Applied Methodology

This session covers strategies of time management, networking strategies, and problem-solving research challenges.

##### *Required Reading:*

Kanazawa, Mark. (2018). *Research Methods for Environmental Studies: A Social Science Approach*. New York: Routledge.

##### *Recommended Readings:*

Bell, J. (2010). *Doing Your Research Project: A Guide for First-Time Researchers* (5th edition).