Research Design for the Environmental Social Sciences Syllabus

ENR 6510 Spring 2023

Course Information

- Course times and location: Mondays, 2:20 pm 4:55 pm; Kottman Hall 333-C
- Credit hours: 3
- Mode of delivery: In-person/synchronous

Instructor

- Name: Dr. Kristina Slagle
- Email: slagle.44@osu.edu
- Phone Number: 937-470-9374
- Office location: Kottman Hall 316-A
- Office/Happy hours: Email me to schedule an appointment. I will generally be in my
 office on Mondays the hour before we meet for class if you want to pop by.
- Preferred means of communication:
 - My preferred method of communication for questions is email.
 - My class-wide communications will be sent through the Announcements tool in CarmenCanvas. Please check your <u>notification preferences</u> (go.osu.edu/canvasnotifications) to be sure you receive these messages.

Course Prerequisites

Graduate standing or permission of instructor.

Course Description

This course provides students with necessary training on the design of social science research needed to address contemporary ENR challenges. The key themes of this course are to investigate the use of different social science research methods (both quantitative and qualitative) and how each method can help researchers answer their research question(s). Instruction will specifically focus on how to explore what questions to ask, how such questions are grounded in existing theory arising from myriad social science disciplines, how to use each method (including their benefits and limitations), how each method influences who responds and what is learned, and ultimately how to move from applied questions independent of existing theory to applied scientific inquiry that builds theory while addressing a pressing need.

This course will engage students through regular class discussion and different assignments. Students will also be asked to consider how their research ideas might be answered in different ways depending on the method(s) used. Material will be tailored to students who are interested in a wide array of social science disciplines, including interdisciplinary approaches. The course is aimed at students with at least some social science background, but students in the natural sciences who take this course and learn from it will be better prepared to work in interdisciplinary settings where natural and social science scholarship come together to address ENR challenges. All students taking ENR 6510 should already know how to develop a problem statement and conduct a literature review by identifying the body of knowledge and theories relevant to their research.

Learning Outcomes

By the end of this course, students should successfully be able to:

- Identify useful social science research questions in relation to ENR topics.
- Ground those research questions within existing social science theory.
- Compare and contrast the benefits, limits, and appropriate uses of a multitude of quantitative and qualitative research methods.
- Apply methodological procedures necessary to make scientific inferences.
- Develop and evaluate sound research methods that can answer key social science questions.

How This Course Works

Mode of delivery: This course is 100% in-person, though we do use Carmen for purposes of organization. There are no required sessions when you must be logged in to Carmen at a scheduled time.

Pace of activities: This course is divided into **weekly modules** that are released one week ahead of time. Students are expected to keep pace with weekly deadlines but may schedule their efforts freely within that time frame.

Credit hours and work expectations: This is a 3 credit-hour course. According to Ohio State bylaws on instruction (go.osu.edu/credithours), students should expect around 3 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 6 hours of homework (reading and assignment preparation, for example) to receive a grade of C average.

Attendance and participation requirements: Research shows regular participation is one of the highest predictors of success. With that in mind, I have the following expectations for everyone's participation:

- Participating in class activities for attendance: at least once per week
 You are expected to attend class and log in to the course in Carmen every week. During most weeks you will probably log into Carmen many times. If you have a situation that might cause you to miss an entire week of class, discuss it with me as soon as possible.
- Zoom meetings and office hours: optional
 Visiting during office hours or scheduling time to meet with me is optional, but highly encouraged and welcomed. Getting to know each other results in improved outcomes for yourself and the class as a whole. Learn more: https://youtu.be/yQq1-_ujXrM

Course Materials, Fees and Technologies

Required Materials and/or Technologies

 Readings and/or media (e.g., videos, podcasts) will be posted to Carmen in advance of the meeting during which we will discuss.

Recommended/Optional Materials and/or Technologies

 Often time, I will also post extra readings and/or media (e.g., videos, podcasts) to Carmen that may be of interest to students seeking depth in any particular area. Please be aware that 'recommended' or 'extra' readings are <u>not</u> required.

Fees and/or Additional Requirements

Not applicable to this course

Required Equipment

- Computer: current Mac (MacOS) or PC (Windows 10) with high-speed internet connection.
- Webcam: built-in or external webcam, fully installed and tested
- Microphone: built-in laptop or tablet mic or external microphone
- Other: a mobile device (smartphone or tablet) to use for BuckeyePass authentication

If you do not have access to the technology you need to succeed in this class, review options for <u>technology and internet access</u> (go.osu.edu/student-tech-access).

Required Software

Microsoft Office 365: All Ohio State students are now eligible for free Microsoft Office 365. Visit the installing Office 365 (go.osu.edu/office365help) help article for full instructions.

CarmenCanvas Access

You will need to use <u>BuckeyePass</u> (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you do each of the following:

- Register multiple devices in case something happens to your primary device. Visit the <u>BuckeyePass - Adding a Device</u> (go.osu.edu/add-device) help article for step-by-step instructions.
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click Enter a Passcode and then click the Text me new

codes button that appears. This will text you ten passcodes, good for 365 days, that can each be used once.

 Install the <u>Duo Mobile application</u> (go.osu.edu/install-duo) on all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357 (HELP) and IT support staff will work out a solution with you.

Technology Skills Needed for This Course

- Basic computer and web-browsing skills
- Navigating CarmenCanvas (go.osu.edu/canvasstudent)
- <u>CarmenZoom virtual meetings</u> (go.osu.edu/zoom-meetings)
- Recording a slide presentation with audio narration and recording, editing and uploading video (go.osu.edu/video-assignment-guide)

Technology Support

For help with your password, university email, CarmenCanvas, or any other technology issues, questions or requests, contact the IT Service Desk, which offers 24-hour support, seven days a week.

Self Service and Chat: go.osu.edu/it

Phone: 614-688-4357 (HELP)

Email: servicedesk@osu.edu

Grading and Faculty Response

How Your Grade is Calculated

Assignment Category	Points
Class Participation	14
Written Assignments (five assignments * six points each)	30
Methodological Case Study – Written	10
Methodological Case Study – Presentation	10
Peer Reviews of presentation	6
Final Project	30

See Course Schedule for due dates.

Descriptions of Major Course Assignments

Assignments

Description: This course relies heavily on writing assignments (e.g., written assignments, methodological case study, final project) that are intended to enhance students' understanding and application of key concepts explored in this class. In particular, students will take their key research idea(s) and, over the course of the semester, consider the ethical challenges they might face when doing research on that topic, the data collection tools that are more likely to render valid data, and the analytical approach that could better serve the research effort, among other issues of interest. The deadlines for submission of these assignments are listed in the "course schedule" at the end of this syllabus. See Carmen for details/due dates.

Academic integrity and collaboration: Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow APA style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in and visit the OSU Writing Center, but no one else should revise or rewrite your work.

Late Assignments

Please refer to Carmen for due dates. Due dates are set to help you stay on pace and to allow timely feedback that will help you complete subsequent assignments. Late assignments will not be accepted unless extreme and documented circumstances arise – and let me know if they do arise. You will benefit from being prepared and completing assignments in advance.

Instructor Feedback and Response Time

I am providing the following list to give you an idea of my intended availability throughout the semester. If you have a technical problem accessing content, remember that you can call <u>614-688-4357 (HELP)</u> at any time.

- Preferred contact method: If you have a question, please contact me first through my
 Ohio State email address. I typically reply to emails within 24 hours on days when
 class is in session at the university.
- Class announcements: I will send all important class-wide messages through the Announcements tool in CarmenCanvas. Please check <u>your notification preferences</u> (go.osu.edu/canvas-notifications) to ensure you receive these messages.
- Grading and feedback: For assignments submitted before the due date, I expect to
 provide feedback and grades within seven days. Assignments submitted after the due
 date may have reduced feedback and grades may take longer to be posted.

Grading Scale

93-100: A

90-92.9: A-

87-89.9: B+

83-86.9: B

80-82.9: B-

77-79.9: C+

73-76.9: C

70-72.9: C-

67-69.9: D+

60-66.9: D

Below 60: E

Other Course Policies

Discussion and Communication Guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- Writing style: Use good grammar, spelling, and punctuation in your writing.
- Tone and civility: Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across in-person or online. I will provide specific guidance for discussions on controversial or personal topics, though you are also welcome to share with me resources you found to be particularly helpful in having or processing these discussions.
- Citing your sources: When we have academic discussions, please cite your sources
 to back up what you say. For use of course materials, list at least the title and page
 numbers from which you are quoting or the source if you are summarizing in your own
 words. For online sources, include a link.
- Backing up your work: Save your work in more than one place (e.g., on hard drive + cloud service or external hard drive.
- Synchronous sessions: I ask you to use your real name and a clear photo of your face
 in your Carmen profile. If we end up using Zoom at any point during the course for
 meetings or class, you are always welcome to use the free, Ohio State themed virtual
 backgrounds (www.osu.edu/downloads/zoom-backgrounds.html) if you would like to do
 so. Remember that Zoom and the Zoom chat are our classroom space in which
 respectful interactions are expected.

Academic Integrity Policy

POLICIES FOR THIS COURSE

See <u>Descriptions of Major Course Assignments</u> for specific guidelines about collaboration and academic integrity in the context of this class.

- Written assignments: Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow APA style (https://apastyle.apa.org/) to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in--but no one else should revise or rewrite your work.
- Reusing past work: In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on

- past research or revisit a topic you've explored in previous courses, please discuss the situation with the instructor in advance of deadlines.
- Falsifying research or results: All research you will conduct in this course is intended to be a learning experience; you should never make your results or your library research look more successful than it was.
- Collaboration and informal peer-review: The course includes many opportunities for formal collaboration with your classmates. While study groups and peer-review of major written projects is encouraged, remember that comparing answers on a quiz or assignment is not permitted. If you're unsure about a particular situation, please feel free to ask the instructor ahead of time.

Ohio State's Academic Integrity Policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's Code of Student Conduct, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's Code of Student Conduct and this syllabus may constitute Academic Misconduct.

The Ohio State University's Code of Student Conduct (Section 3335-23-04) defines academic misconduct as: Any activity that tends to compromise the academic integrity of the University, or subvert the educational process. Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's Code of Student Conduct is never considered an excuse for academic misconduct, so I recommend that you review the Code of Student Conduct and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University's Code of Student Conduct (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Copyright for Instructional Materials

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

- 1. Online reporting form at equity.osu.edu,
- 2. Call 614-247-5838 or TTY 614-688-8605,
- 3. Or Email equity@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual
 misconduct as soon as practicable but at most within five workdays of becoming aware
 of such information: 1. Any human resource professional (HRP); 2. Anyone who
 supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty
 member."

Diversity Statement

The Ohio State University affirms the importance and value of diversity of people and ideas. We believe in creating equitable research opportunities for all students and to providing programs and curricula that allow our students to understand critical societal challenges from diverse perspectives and aspire to use research to promote sustainable solutions for all. We are committed to maintaining an inclusive community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among all members; and encourages each individual to strive to reach their own potential. The Ohio State University does not discriminate on the basis of age, ancestry, color, disability,

gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, race, religion, sex, gender, sexual orientation, pregnancy, protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment.

To learn more about diversity, equity, and inclusion and for opportunities to get involved, please visit:

- https://odi.osu.edu/
- https://odi.osu.edu/racial-justice-resources
- https://odi.osu.edu/focus-on-racial-justice
- http://mcc.osu.edu/

In addition, this course adheres to **The Principles of Community** adopted by the College of Food, Agricultural, and Environmental Sciences. These principles are located on the Carmen site for this course; and can also be found at https://go.osu.edu/principlesofcommunity. For additional information on Diversity, Equity, and Inclusion in CFAES, contact the CFAES Office for Diversity, Equity, and Inclusion (https://equityandinclusion.cfaes.ohio-state.edu/). If you have been a victim of or a witness to a bias incident, you can report it online and anonymously (if you choose) at https://equity.osu.edu/.

LAND ACKNOWLEDGEMENT

The Office of Diversity and Inclusion would like to acknowledge that the land The Ohio State University occupies is the ancestral and contemporary territory of the Shawnee, Potawatomi, Delaware, Miami, Peoria, Seneca, Wyandotte, Ojibwe and Cherokee peoples. Specifically, the university resides on land ceded in the 1795 Treaty of Greeneville and the forced removal of tribes through the Indian Removal Act of 1830. We want to honor the resiliency of these tribal nations and recognize the historical contexts that have and continue to affect the Indigenous peoples of this land.

Spoken Land Acknowledgement by John Bickers, Citizen of the Miami Tribe of Oklahoma

A land acknowledgement recognizes and respects the relationship that exists between Indigenous peoples and their ancestral and contemporary territories. Additionally, a land acknowledgement provides opportunity to explore the current impact of colonization and systemic oppression on Indigenous peoples. Land acknowledgements do not exist in past tense or a historical context as colonialism is a current ongoing process.

For more information on Land Acknowledgements, please see the OSU Multicultural Center's webpage dedicate to this topic or visit the Center's website for additional ways to engage in multicultural understanding of this land.

Your Mental Health

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 a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life Counseling and Consultation Services (CCS) by visiting ccs.osu.edu or calling (614) 292-5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at (614) 292-5766 and 24 hour emergency help is also available through the 24/7 National Suicide Prevention Hotline at 1-(800)-273-TALK or at suicidepreventionlifeline.org or the Suicide and Crisis Lifeline at 988.

David Wirt, wirt.9@osu.edu, is the CFAES embedded mental health counselor. He is available for new consultations and to establish routine care. To schedule with him, please call 614-292-5766. Students should mention their affiliation with CFAES when setting up a phone screening.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DIFFERING ABILITIES

Requesting accommodations

The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Accessibility of Course Technology

This course requires use of CarmenCanvas (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations as early as possible.

- <u>CarmenCanvas accessibility</u> (go.osu.edu/canvas-accessibility)
- Streaming audio and video
- CarmenZoom accessibility (go.osu.edu/zoom-accessibility)



Course Schedule

Refer to the CarmenCanvas course for up-to-date due dates.

(content is subject to change based on any number of things, including the whims of the instructor - please check Carmen regularly)

Week	Date	Class Content and Readings	
1	9- Jan	 Intro to social science research: Discipline in an interdisciplinary world Newing. (2011). Chap. 1: Social Science Research in Conservation focus on Section 1.2 (including 1.2.1, 1.2.2, and 1.2.3) starting on pg. 5 through top of pg. 12. Reich & Reich. (2006). Cultural competence in interdisciplinary collaborations: A method for respecting diversity in research partnerships. American Journal of Community Psychology, 38, 51-62. Cox, M. (2015). A basic guide for empirical environmental social science. Ecology and Society, 20(1), 63. 	
2	16- Jan	MLK Day – NO CLASS Recommended: Listen to James Baldwin' speech "Living and Growing in a White World", which was delivered to students attending a primarily Black high school in 1963 about the role of education and representation in what is taught to and learned by us. Reflect on the questions he raises: What is the role of education in shaping society and who we are? What are the roles of a teacher and student within any system of education? How can we take these lessons into the classroom today and beyond? (Note: the speech itself is ~14 mins, yet the excellent Q&A extends the video to ~32 mins – worth listening to all!)	
3	23- Jan	Ethics in social science research (e.g., incentives, cultural sensitivity, IRB) 1. Secaira (2019) Abigail Echo-Hawk on the art and science of 'decolonizing data' 2. Besen-Cassino & Cassino (2017) Chap. 3: Research ethics 3. Newing (2011) Chap. 12: The Role of the Researcher 4. Newing (2011) Chap. 13: The Ethical Issues in Research Assignment #1 on ethical challenges in research due January 27th at 11:59pm	



		Problem framing and the role of theory	
4	30- Jan	 Besen-Cassino & Cassino (2017) Chap. 4: Theory and Paradigms King, G., Keohane, R. O., & Verba, S. (1994). Designing social inquiry: Scientific inference in qualitative research. Princeton university press (pgs. 99-114) Dewulf et al. (2005) Integrated management of natural resources: Dealing with ambiguous issues, multiple actors and diverging frames. Water Science & Technology, 52(6), 115-124. 	
		Variables and measurement considerations (e.g., validity, reliability, generalizability, transferability)	
5	6-Feb	 Drost, E. A. (2011) Validity and Reliability in Social Science Research. Education Research and Perspectives, 38(1), 105 Besen-Cassino & Cassino (2017) Chap. 2: Research Questions and Operationalization (pgs. 22-43) 	
		Assignment #2 on research question and measurement due February 10 $^{ m th}$ at 11:59 pm	
Considering analysis in your research design			
6	13- Feb	 Newing (2011) Chap. 14: Processing and analysis of qualitative data Newing (2011) Chap. 15: Quantitative analysis: Descriptive statistics Newing (2011) Chap. 16: Quantitative analysis: Inferential statistics 	
		Assignment #3 on the importance of analysis due February 17th at 11:59 pm	
		Case selection and sampling	
7	20- Feb	 Newing (2011) Chap. 4: Sampling Onwuegbuzie & Collins. (2007). A typology of mixed methods sampling designs in social science research. <i>Qualitative Report</i>, 12(2), 281-316. 	
		Questionnaire/survey design	
8	27- Feb	 Schaeffer, N. C., & Dykema, J. (2020). Advances in the Science of Asking Questions. Annual Review of Sociology, 46 Dillman et al. (2014) Chap. 4: The fundamentals of writing questions Dillman et al. (2014) Chap. 7: Ordering questions and testing for question order effects 	
		Assignment #4 on case selection and sampling + questions design due March $3^{ m rd}$ at 11:59 pm	
9	6- Mar	 Lune & Berg (2017) Chap. 4: A Dramaturgical Look at Interviewing Lune & Berg (2017) Chap. 5: Focus Group Interviewing Newing (2011) Chap. 14: Processing and analysis of qualitative data 	



	13- Mar	Spring Break – NO CLASS
10	20- Mar	 Lune & Berg (2017) Chap. 6: Ethnographic Field Strategies Gifford (2016) Chap. 2: Observational methods: The first step in science Gifford (2016) Chap. 3: Behavioral mapping and tracking Abrams et al. (2020) Encouraging safe wildlife viewing in National Parks
11	27- Mar	Participatory research and other special techniques 1. Lune & Berg (2017) Chap. 7: Participatory Action Research 2. Newing (2011) Chap. 9: Community Workshops and the PRA Toolbox 3. Newing (2011) Chap. 10: Participatory Mapping Assignment #5 on interviews, focus groups, and participatory research due on March 31st at 11:59 pm.
12	3- Apr	 Content Analysis Benoit. (2019). Text as data: An overview. Berardo et al. (2020). Hydraulic fracturing & political conflict: News media coverage of topics and themes across 9 states.
13	10- Apr	Secondary data sources 1. Liu et al. (2007) Complexity of coupled human and natural systems 2. Get a quick tutorial of Social Explorer, which has loads of data - https://www.youtube.com/watch?v=SSJllrIoGjg Methodological Case Study-Written portion due Friday April 14 th at 11:59 pm.
14	17- Apr	 Triangulation – Mixed-methods, mixed-modes, and not getting mixed up Newing (2011) Chap. 3: Developing the methodology (Read Section 3.4, pgs. 57-61) Newing (2011) Chap. 6: Qualitative Interviews and Focus Groups (pgs. 115-117; particularly box 6.14) Rapp Learn (2020) 'Two-eyed seeing' - Interweaving Indigenous knowledge and western science Methodological Case Study-Presentation portion due Friday April 21st at 11:59 pm.
15	24- Apr	NO CLASS – <mark>Peer reviews + final project due Monday April 24th at 5 pm.</mark>
		NO EXAM FOR THIS COURSE – GOOD LUCK WRAPPING UP EVERYTHING!

