Term Information

Effective Term   Autumn 2022

General Information

Course Bulletin Listing/Subject Area   Anthropology
Fiscal Unit/Academic Org   Anthropology - D0711
College/Academic Group   Arts and Sciences
Level/Career   Undergraduate
Course Number/Catalog   3050
Course Title   Social and Ecological Systems: From Problems to Prospects
Transcript Abbreviation   Soc/Ecolog Sys
Course Description   This high-impact research course surveys the diverse past, present, and future of human-environment relationships. Students will investigate key contemporary issues, discover their cultural and historical causes, and explore how constructive solutions can be achieved.
Semester Credit Hours/Units   Fixed: 4

Offering Information

Length Of Course   14 Week
Flexibly Scheduled Course   Never
Does any section of this course have a distance   No
education component?
Grading Basis   Letter Grade
Repeatable   No
Course Components   Lecture
Grade Roster Component   Lecture
Credit Available by Exam   No
Admission Condition Course   No
Off Campus   Never
Campus of Offering   Columbus, Lima, Mansfield, Marion, Newark, Wooster

Prerequisites and Exclusions

Prerequisites/Corequisites
Exclusions
Electronically Enforced   No

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code   45.0201
Subsidy Level   Baccalaureate Course
Intended Rank   Freshman, Sophomore, Junior, Senior

Requirement/Elective Designation

Sustainability

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes	• Understand and explain the dynamic interconnections between physical earth systems, ecosystems, and human systems.
	• Integrate ideas from the physical, biological, and social sciences and the humanities and apply them to current sustainability dilemmas and debates.
	• Investigate key contemporary environmental/social issues, discover their cultural and historical causes and consequences, and explore how constructive solutions could be achieved.
	• Conduct independent and collaborative/group research and communicate findings in oral, written, and poster presentations.
Content Topic List	• Sustainbility
	• Socioecological systems
	• Climate Change
	• Environment
	• Environmental Anthropology
Sought Concurrence	Yes

Attachments

- Che BiochemConcurrence_Form_10-15-15_1_SocialEcologicalSystems_ASC2.pdf: Chem/Biochem Concurrence

  (Concurrence. Owner: Healy,Elizabeth Ann)

- CLSE Concurrence_Form_10-15-15_1_SocialEcologicalSystems_ASC.pdf: CLSE Concurrence

  (Concurrence. Owner: Healy,Elizabeth Ann)

- Concurrence_Form_10-15-15_1_SocialEcologicalSystems_ASC EEOB.pdf: EEOB Concurrence

  (Concurrence. Owner: Healy,Elizabeth Ann)

- Concurrence_Form_10-15-15_1_SocialEcologicalSystems_FAES_SENR (1).pdf: SENR Concurrence

  (Concurrence. Owner: Healy,Elizabeth Ann)

- Concurrence_Form_Anthro2350_SocialEcologicalSystems_ASC_COMM.pdf: Comm Concurrence

  (Concurrence. Owner: Healy,Elizabeth Ann)

- EarthSciConcurrence 2350.pdf: Earth Sci Concurrence

  (Concurrence. Owner: Healy,Elizabeth Ann)

- FCOB Concurrence for Anthropology 2350_.docx: FCOB Concurrence

  (Concurrence. Owner: Healy,Elizabeth Ann)

- Law concurrence Anthro 2350.pdf: Law Concurrence

  (Concurrence. Owner: Healy,Elizabeth Ann)

- Public Health Concurrence 2350.pdf: Pub Health Concurrence

  (Concurrence. Owner: Healy,Elizabeth Ann)

- 3050 submission-sustainability_Anthr3050.pdf: GE Justification

  (GEC Model Curriculum Compliance Stmt. Owner: Healy,Elizabeth Ann)

- ANT 3050 on BA Curriculum Map.docx: BA Map

  (Other Supporting Documentation. Owner: Healy,Elizabeth Ann)

- ANT 3050 on BS Curriculum Map.docx: BS Map

  (Other Supporting Documentation. Owner: Healy,Elizabeth Ann)

- 3050 ThemeCourse Proposal.docx: GE Proposal

  (Other Supporting Documentation. Owner: Healy,Elizabeth Ann)

- Note from Instructor Anthropology 3050.docx: Note from Instructor

  (Other Supporting Documentation. Owner: Healy,Elizabeth Ann)

- ANTHROP3050-research-creative-inquiry-inventory_Revised.pdf: Inventory

  (Other Supporting Documentation. Owner: Healy,Elizabeth Ann)

- Social and Ecological Systems From Problems to Prospects_Revised.docx: Syllabus

  (Syllabus. Owner: Healy,Elizabeth Ann)

Comments

- In order to address the panel's concerns, the instructor made major modifications to two aspects of the course. First, they expanded the research capstone project to guide students' work for the entire course, leading to a more robust and impactful research experience. Second, they integrated research training and facilitation experiences into each class meeting. This will both serve to guide students through their research projects and also provide them with intensive training on how to conduct research on socioecological issues that will be valuable in their lives after the course. *(by Healy,Elizabeth Ann on 02/25/2022 10:05 AM)*

- Please see Panel feedback email sent 02/21/2022. *(by Hilty,Michael on 02/21/2022 11:05 AM)*

- - A course with new GE cannot become effective until AU22. Please change term.
  - Instructor should fill out the appropriate integrated practice course inventory & upload in curriculum https://oaa.osu.edu/sites/default/files/uploads/general-education-review/new-ge/research-creative-inquiry-inventory.pdf (Also instructor should make sure to consult the description of the integrative practice here https://oaa.osu.edu/sites/default/files/uploads/general-education-review/new-ge/research-creative-inquiry-courses-description-expectations.pdf) *(by Vankeerbergen,Bernadette Chantal on 06/11/2021 09:34 AM)*

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Healy,Elizabeth Ann	05/13/2021 02:38 PM	Submitted for Approval
Approved	Guatelli-Steinberg,Debra	05/13/2021 03:37 PM	Unit Approval
Revision Requested	Vankeerbergen,Bernadette Chantal	06/11/2021 09:42 AM	College Approval
Submitted	Healy,Elizabeth Ann	06/14/2021 01:26 PM	Submitted for Approval
Approved	Guatelli-Steinberg,Debra	06/14/2021 04:37 PM	Unit Approval
Approved	Vankeerbergen,Bernadette Chantal	08/05/2021 03:04 PM	College Approval
Revision Requested	Hilty,Michael	09/14/2021 09:14 AM	ASCCAO Approval
Submitted	Healy,Elizabeth Ann	09/16/2021 02:22 PM	Submitted for Approval
Approved	Guatelli-Steinberg,Debra	09/16/2021 03:57 PM	Unit Approval
Approved	Vankeerbergen,Bernadette Chantal	09/28/2021 02:32 PM	College Approval
Revision Requested	Hilty,Michael	12/03/2021 02:39 PM	ASCCAO Approval
Submitted	Healy,Elizabeth Ann	01/21/2022 08:26 AM	Submitted for Approval
Approved	Guatelli-Steinberg,Debra	01/21/2022 09:22 AM	Unit Approval
Approved	Vankeerbergen,Bernadette Chantal	02/01/2022 01:11 PM	College Approval
Revision Requested	Hilty,Michael	02/21/2022 11:05 AM	ASCCAO Approval
Submitted	Healy,Elizabeth Ann	02/25/2022 10:08 AM	Submitted for Approval
Approved	Guatelli-Steinberg,Debra	02/25/2022 12:27 PM	Unit Approval
Approved	Vankeerbergen,Bernadette Chantal	02/27/2022 12:34 PM	College Approval
Pending Approval	Cody,Emily Kathryn Jenkins,Mary Ellen Bigler Hanlin,Deborah Kay Hilty,Michael Vankeerbergen,Bernadette Chantal Steele,Rachel Lea	02/27/2022 12:34 PM	ASCCAO Approval

Anthropology 3050
Social and Ecological Systems: From Problems to Prospects

Autumn 2022 ~ The Ohio State University ~ 4 Credits

Time and Place:
Two 120-minute meetings per week (e.g., Tuesdays and Thursdays, 8:30-10:30am)

Instructor: Dr. Anna Willow
Email: willow.1@osu.edu
Phone: (740)725-6259
Office: 350B Morrill Hall
Office Hours: TBD

Course Learning Goals and Outcomes

The goal of this course is to introduce students to essential concepts in socioecological systems thinking and train them to apply these concepts to real world problems through independent thinking and research. By the end of the course, students will be able to: (1) Understand and explain dynamic interconnections between physical earth systems, ecosystems, and human systems, (2) integrate ideas from the physical, biological, and social sciences and the humanities and apply them to current sustainability dilemmas and debates, (3) investigate key contemporary environmental/social issues, discover their cultural and historical causes and consequences, and explore how constructive solutions could be achieved, and (4) conduct collaborative research and communicate findings through oral, written, and poster presentations.

Course Overview

This course surveys the past, present, and future of human-environment relationships. Students will be exposed to essential concepts in the physical and ecological sciences as well as the environmental social sciences and humanities. Using interdisciplinary tools, students will investigate key contemporary issues, discover their cultural and historical causes and consequences, and explore how constructive solutions could be achieved. This is an integrative high-impact course, with an emphasis on research. As such, it involves intensive research and writing. Students will learn how to conduct research on complex socioecological systemic issues and present their findings in a compelling manner. This course counts as a cultural anthropology elective toward the fulfillment of the Anthropology (BA) and Anthropological Sciences (BS) majors. Class meetings will consist of a combination of lectures, discussions, research workshops, research preparation and facilitation, and occasional guest lectures and/or films. Students in this course will gain a basic understanding of the dynamic interconnections between physical earth systems, ecosystems, and human systems that they will be able to apply to their future studies, including the Sustainable and Resilient Social and Ecological Systems (SARSES) certificate. While participation in the certificate program is not necessary for enrollment or success in this course, students will begin planning for and building the portfolio required for certificate completion.

Course Requirements and Grading

Assignment	Due Date	Percentage of Final Grade
Project Proposal	5th Class Meeting	15%
Contexts and Consequences Presentation	11th Class Meeting	15%
Potential Solutions and Data Collection Plan	20th Class Meeting	15%
Final Report	Final Exam Period	25%
Poster	Final Exam Period	10%
Reading Response Journal	Weekly	10%
Engagement/Participation	Ongoing	10%

Students in Anthropology 3050 will complete a collaborative semester-long research capstone project that takes a socioecological approach and is guided by the goal of building a more sustainable and resilient future. They will draw on knowledge they gain in the course to identify a real-world problem, explore its contexts and consequences, identify possible solution/s, collect primary data to determine if and how their proposed solution/s will work, and report on what they learned to their peers and the public. Students will work in teams to develop proposals, do background research, conduct exploratory research projects, and share their findings. As described in the Course Outline, a significant portion of each class meeting (approximately one-third or 40 minutes) will be directed to research training, preparation, and facilitation. Research teams will convene during each class meeting and students should expect frequent peer and instructor feedback. Students will be engaged in the entire research process and should be prepared to invest a considerable amount of time in their projects, both inside and outside of class. Most project teams will consist of 3-4 students. Smaller or larger groups will be considered on a case-by-case basis. While an academic division of labor is acceptable, all group members are expected to contribute equally to the success of the project.

Projects will be developed in several stages, each which will contribute to students' final grade in the course:

Project Proposal: Research teams will develop a 4-5 page (double-spaced) proposal outlining what they plan to research, how, and why they believe their topic is significant. While students must select a socio-ecological systemic problem to address, specific topics and approaches will vary widely. Proposals will be turned in as well as informally presented to the class for peer discussion and feedback. 15% of final grade. Due at 5th class meeting.

Contexts and Consequences Presentation: Research teams will develop a creative presentation (i.e., digital media, STEAM) that traces the social and ecological contexts and consequences of their topic. In so doing, they will attain a level of expertise that allows them to propose potential solutions and conduct effective research. Students are expected to deepen their background understanding of their topic and put creative modes of scholarly expression into practice. Projects will be presented and discussed in class. 15% of final grade. Due at 11th class meeting.

Potential Solutions and Research Plan: Students will research potential solutions to their group's selected problem and develop a realistic plan for addressing the problem. Plans will be turned in as well as informally presented to the class for peer discussion and feedback. 4-5 pages (double-spaced). 15% of final grade. Due at 20th class meeting.

Final Report: Findings will be summarized in an 8-10 page (double-spaced) paper and reported to the class and the public in a final poster presentation. The paper is worth 25% of the final grade and the poster is worth 10%. A draft will be presented to the class for feedback during the final week of class and the final paper and poster are due during the final exam period for the course.

In addition, students will earn points toward their final grades in the following manners:

Reading Response Journal: Each week, students will submit a journal containing their responses and reflections concerning the assigned readings. Weekly. 10% of final grade.

Course Engagement/Participation: Students are expected to demonstrate their engagement in the course by participating in class meetings, completing assigned readings, and applying themselves fully on all course work. Ongoing. 10% of final grade.

Details on all assignments and expectations will be discussed in class.
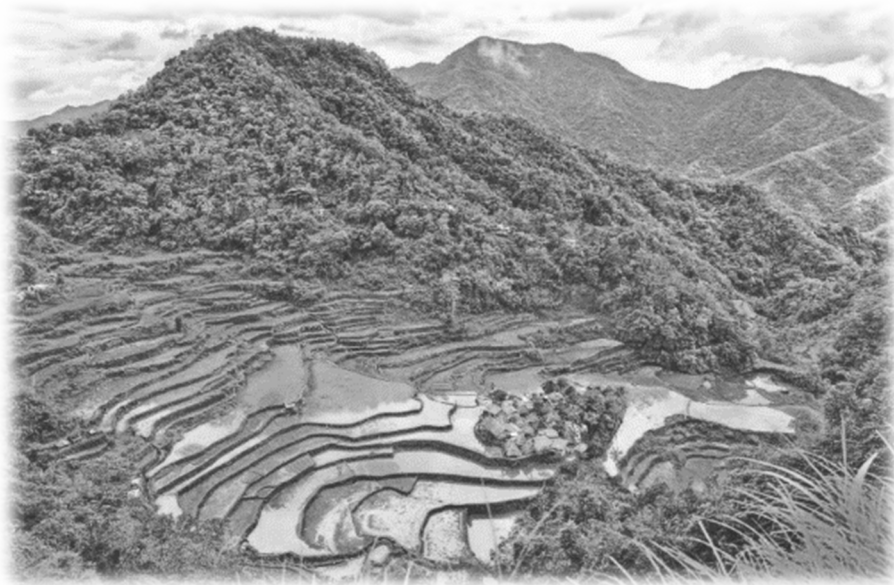
Course Policies and Other Important Information

Carmen: Please check Carmen regularly. Links to online material, lecture outlines, important announcements, and all major grades for the course will be posted in Carmen. Set your notification settings so that you get an email (or alert) when there is a new announcement.

Readings: Readings for this course are available online through Carmen or the OSU Library. Please read the selections listed in the Course Outline in advance of that day's class meeting.
        ****Additional resources and research guides will be shared in class.*

Student Well-Being Statement: The well-being of students is of primary importance. If you are facing any challenges related to your physical or mental health, or obstacles like food or housing insecurity, please do not hesitate to get in touch to discuss ways we can put you in the best possible position to succeed.

Students with Disabilities: The University strives to make all learning experiences as accessible as possible. 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.

Academic Integrity: All students should become familiar with the rules governing academic misconduct, especially as they pertain to plagiarism and cheating. Ignorance of the rules is not an excuse and all alleged cases of academic misconduct will be reported to the Committee on Academic Misconduct (COAM). It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct.

Statement on Title IX: Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at http://titleix.osu.edu, emailing the Ohio State Title IX Coordinator at titleix@osu.edu. Please note that Ohio State University faculty and other personnel are required to report to the University's Title IX Office any instances of sexual violence or harassment that students disclose.

Diversity: The Ohio State University affirms the importance and value of diversity in the student body. Our programs and curricula reflect our multicultural society and global economy and seek to provide opportunities for students to learn more about persons who are different from

themselves. We are committed to maintaining a community that recognizes and values the inherent worth and dignity of every person; fosters sensitivity, understanding, and mutual respect among each member of our community; and encourages each individual to strive to reach his or her own potential. Discrimination against any individual based upon protected status, which is defined as age, color, disability, gender identity or expression, national origin, race, religion, sex, sexual orientation, or veteran status, is prohibited.

Attendance and Assignment Policy*:* Students are expected to attend every course meeting. Late assignments will be accepted but will gradually loose points.

Technology Policy: Phones and internet use are permitted in class if (and only if) they enhance course participation. Unless you have an ongoing emergency, please silence your cellphone.

GE Expected Learning Outcomes

This course fulfills the **Sustainability Theme** requirement.

The Ohio State Sustainability Education and Learning Committee defines a "sustainability course" as one that "acknowledges the fundamental dependence of humans on earth and environmental systems and addresses one or more aspects of the interdependence of human and natural systems…" and focuses its view of these interactions of human-natural systems through at least one of the dimensions of sustainability: "environmental & earth systems; economy and governance; society and culture; engineering, technology and design; and health and well-being." The following Expected Learning Outcomes were drafted to align with that description:

ELOs

Theme: Sustainability	
Goal	**Expected Learning Outcomes**
1. Successful students will analyze sustainability at a more advanced and in-depth level than in the Foundations component. 2. Successful students will integrate approaches to sustainability by making connections to out-of- classroom experiences with academic knowledge or across disciplines and/or to work they have done in previous classes and that they anticipate doing in future. 3. Successful students will analyze and explain how social and natural systems function, interact and evolve over time; how human well-being depends on these interactions; how actions have impacts on subsequent generations and societies globally; and how human values, behaviors and institutions impact multifaceted potential solutions across time.	**Successful students are able to…** 1.1 Engage in critical and logical thinking about the topic or idea of sustainability. 1.2 Engage in an advanced, in-depth, scholarly exploration of the topic or idea of sustainability. 2.1 Identify, describe and synthesize approaches or experiences as they apply to sustainability. 2.2 Demonstrate a developing sense of self as a learner through reflection, self-assessment and creative work, building on prior experiences to respond to new and challenging contexts. 3.1 Describe elements of the fundamental dependence of humans on Earth and environmental systems, and on the resilience of these systems. 3.2 Describe, analyze and critique the roles and impacts of human activity and technology on both human society and the natural world, in the past, present and future. 3.3 Devise informed and meaningful responses to problems and arguments in the area of sustainability based on the interpretation of appropriate evidence and an explicit statement of values.

"Social and Ecological Systems: From Problems to Prospects" satisfies these learning goals and expected outcomes by emphasizing throughout the complex relationships between human and non-human Earth systems, including an examination of changes in human activities and technologies over time and space. Through readings, discussions, and assignments students will hone and demonstrate their critical thinking skills in relation to multiple sustainability topics. Students will deepen their awareness of numerous global environmental and socioecological problems, approach sustainability through diverse disciplinary viewpoints, and be empowered to respond to pressing socioecological problems in an innovative and informed manner.

This course is also a GE **Integrative Practice: Research and Creative Inquiry** course. As such, it will include:

- Performance expectations set at appropriately high levels -- e.g., students investigate their own questions or develop their own creative projects.
- Significant investment of time and effort by students over an extended period -- e.g., scaffolded scientific or creative processes building across the term, including, as examples, reviewing literature, developing methods, collecting data, interpreting or developing a concept or idea into a full-fledged production or artistic work.
- Interactions with faculty and peers about substantive matters including regular, meaningful faculty mentoring and peer support.
- Frequent, timely and constructive feedback for students on their work (iteratively scaffolding research or creative skills in curriculum to build over time).
- Periodic, structured opportunities to reflect and integrate learning in which students interpret findings or reflect on creative work.
- Opportunities to discover relevance of learning through real-world applications -- e.g., mechanism for allowing students to see their focused research question or creative project as part of a larger conceptual framework.
- Public demonstration of competence, such as a significant public communication of research or display of creative work, or a community scholarship celebration.
- Experiences with diversity wherein students demonstrate intercultural competence and empathy with people and worldview frameworks that may differ from their own.
- Explicit and intentional efforts to promote inclusivity and a sense of belonging and safety for students -- e.g., use of universal design principles, culturally responsible pedagogy.
- Clear plan to market this course to get a wider enrollment of typically underserved populations.

Course Outline

Part 1: The State of the World

1)
Introductions and Expectations/How Big Is Your Footprint?
Research: What Counts as a Socioecological Systemic Issue?

2)
Systems Thinking Fundamentals
Readings:
> ~Holling, C.S., 2001. Understanding the Complexity of Economic, Ecological, and Social Systems. *Ecosystems* 4: 390-405. [Carmen]
> ~ Walker, Brian et al. 2004. Resilience, Adaptability and Transformability in Social–Ecological Systems. *Ecology and Society* 9(2):5 [Carmen]

Research: Project Ideas Free Brainstorm

3)
Status Report I: The Climatic System/Status Report II: The Ecological System
Readings:
> ~NOAA Global Climate Report (https://www.ncdc.noaa.gov/sotc/global/) [view most recent report online]
> ~IPCC. 2018: Summary for Policymakers-Global Warming of 1.5°C. [Carmen]
> ~ IPBES. 2019. Summary for Policymakers-Global Assessment Report on Biodiversity and Ecosystem Services. [Carmen]

Research: Form Project Groups/Research Planning Guides (see Appendix)

4)
Status Report III: The Social System
Film: *Anthropocene: The Human Epoch* (Part 1)
Readings:
> ~United Nations. 2020. Inequality in a Changing World-Executive Summary. [Carmen]

Research: Project Planning and Group-Based Feedback

5)

Welcome to the Anthropocene

Film: *Anthropocene: The Human Epoch* (Part 2)

Readings:

~Crutzen, Paul. 2002. Geology of Mankind. *Nature* 415:23. [Carmen]

~Scranton, Roy. 2015. *Learning to Die in the Anthropocene: Reflections on the End of a Civilization.* City Lights. **Introduction, Chapter 1, and Chapter 2 are required (remainder of book is optional)** [access online through OSU Library at https://library.ohio-state.edu/record=b8408482~S7]

Research: Project Proposal Presentations

PROJECT PROPOSAL DUE

Part 2: How Did We Get Here?

6)

Deep Earth History/Climates of the Past

Readings (Chose one option):

~Basic: Encyclopedia Britannica: Climate Change Throughout History. https://www.britannica.com/explore/savingearth/climate-change-throughout-history [online resource]

~Advanced: Westerhold, Thomas et al. 2020. An Astronomically Dated Record of Earth's Climate and its Predictability Over the Last 66 Million Years. *Science* 369(6509):1383-1387. [Carmen]

Research: Why Does Context Matter?

7)

Life on Earth: An Overview

Readings:

~BBC Earth: 25 Biggest Turning Points in the Earth's History. http://www.bbc.com/earth/bespoke/story/20150123-earths-25-biggest-turning-points/ [online resource]

~UC Berkeley. The World's Biomes. https://ucmp.berkeley.edu/exhibits/biomes/index.php [online resource]

Research: Using Search Engines and Finding Sources (Library)

8)
Human Origins and Options
Readings:
~Harari, Yuval Noah. 2020. *Sapiens: A Graphic History*. Harper. **Part 1 (Rebels of the Savannah) is required; the remaining 3 parts are optional** [Carmen]
Research: Being Selective About Sources

9)
The Problem with Civilization
Readings:
~Jensen, Derrick. Endgame: Volume 1: The Problem of Civilization. From *The Derrick Jensen Reader.* Seven Stories Press. [Carmen]
Research: Creative Modes of Presentation

10)
Research: Context Presentation Work (and Help) Day
Readings: No required readings. Select resources to aid your project.

11)
Research: Context Presentations
Readings: No required readings. Select resources to aid your project.

CONTEXTS AND CONSEQUENCES PRESENTATION DUE

Part 3: A World of Problems[1]

12)
How—and Why—We're Wrecking the Planet
Readings:
~Steffen, Will et al. 2015. The Trajectory of the Anthropocene: The Great Acceleration. *The Anthropocene Review* 2(1):81-98. [Carmen]
Research: Solutions Free Brainstorm

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[1] The topics here are examples and can be modified based on individual instructors' needs and expertise. Guest speakers will be beneficial in this section of the course.

13)
(Un)Natural Disasters
Readings:

~Button, Gregory and Mark Schuller. 2016. *Contextualizing Disaster.* Berghahn Books. ***Note***: Read Introduction and one case study chapter (to be assigned). [Carmen]

Research: Modes of Research—Surveys

14)
The 6th Extinction
Readings:

~Kolbert, Elizabeth. 2009. The Sixth Extinction? *The New Yorker*. [Carmen]
~Ceballos, Gerardo et al. 2020. Vertebrates on the Brink as Indicators of Biological Annihilation and the Sixth Mass Extinction. *Proceedings of the National Academy of Sciences* 117(24):13596-13602. [Carmen]

Research: Modes of Research—Ethnography and Interviews

15)
From Melting Glaciers to Dying Reefs
Film: Chasing Ice or *Chasing Coral*
Readings:

~ Gao, Jing et al. 2019. Collapsing Glaciers Threaten Asia's Water Supplies. *Nature* 565:19-21. [Carmen]
~Hoegh-Guldberg, Ove et al. 2017. Coral Reef Ecosystems Under Climate Change and Ocean Acidification. *Frontiers in Marine Science* 4:Article 158. [Carmen]

Research: Modes of Research—Experiments and Prototypes

16)
Industrial Agriculture
Film: Food, Inc.
Readings:

~ Climate Change and Agriculture. Union of Concerned Scientists. View online at https://www.ucsusa.org/resources/climate-change-and-agriculture [online resource]

Research: Using Case Studies and Role Models

17)
Extractivism
Readings:
> ~Willow, Anna. 2017. Indigenous ExtrACTIVISM in Boreal Canada: Colonial Legacies, Contemporary Struggles and Sovereign Futures. *Humanities* 5(55):1-15. [Carmen]

Research: The Importance of (Good) Mentors

18)
Overconsumption
Film: The Story of Stuff
Readings:
> ~De Graaf, John et al. 2014. *Affluenza: How Overconsumption Is Killing Us—And How to Fight Back*. San Francisco: Berrett-Koehler Publishers. **Chapters 1, 2, and 3 are required; the remainder is optional** [access online through OSU Library at https://library.ohio-state.edu/record=b9142769~S7]

Research: Project Planning and Group-Based Feedback

19)
Plastic Pollution
Film: A Plastic Ocean
Readings:
> ~Ritchie, Hannah and Max Roser. 2018. Plastic Pollution. *Our World in Data*. View online at https://ourworldindata.org/plastic-pollution?utm_source=newsletter [online resource]
>
> ~Microplastics in Human Poop. 2018. *National Geographic*. View online at https://www.nationalgeographic.com/environment/article/news-plastics-microplastics-human-feces?loggedin=true [online resource]

Research: Project Planning and Group-Based Feedback

Part 4: A World of Prospects[2]

20)
Research: Potential Solutions and Data Collection Plans—Presentations and Discussion

POTENTIAL SOLUTIONS AND DATA COLLECTION PLANS DUE

21)
Future Scenarios
Readings:
> ~Pacala, Stephen, and Robert Socolow. 2004. Stabilization Wedges: Solving the Climate
> Problem for the Next 50 Years with Current Technologies. *Science* 305(5686):968-972.
> [Carmen]
> ~US Climate Resilience Toolkit—Midwest. View online at
> https://toolkit.climate.gov/regions/midwest [online resource]
> ~Singh, Vandana. Entanglement. [Carmen]

Research: Finding Research Participants and Community Collaborators

22)
Biophilia
Film: Biophilic Design: The Architecture of Life
Readings:
> ~Kellert, Stephen, and Elizabeth Calabrese. 2015. The Practice of Biophilic
> Design. London: Terrapin Bright LLC. [Carmen]

Research: Avoiding—and Coping With—Pitfalls

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[2] Topics listed here are sample topics and can be modified depending on individual instructors' preference. Most
class meeting in this section of the course are expected to include group work time.

23)
Local Food and Regenerative Agriculture
Film: Kiss the Ground
Listen:
>~Wes Jackson on the Problem of Agriculture and the Perennial Solution.
>https://quiviracoalition.org/down-to-earth-podcast-episode-7/ [online resource]

Readings:
>~Barker, Debbie and Michael Pollan. 2015. A Secret Weapon to Fight Climate Change:
>Dirt. https://michaelpollan.com/articles-archive/a-secret-weapon-to-fight-climate-change-dirt/ [online resource]
>~ Lal, Rattan. 2020. Regenerative Agriculture for Food and Climate. *Journal of Soil and Water Conservation* 75(5):123A-124A. [Carmen]

Research: Group Work and Feedback

24)
Success Stories
Readings:
>~McAfee, Dominic et al. 2019. Everyone Loves a Success Story: Optimism Inspires
>Conservation Engagement. *BioScience* 69(4):274-281. [Carmen]
>~12 Conservation Success Stories—In Pictures. View online at
>https://www.theguardian.com/environment/gallery/2018/may/22/12-conservation-success-stories-in-pictures [Online resource]

Research: Presenting Findings—Writing

25)
The Future of Energy
Film: The Future of Energy
Readings:
>~Ritchie, Hannah and Max Roser. 2020. Renewable Energy. *Our World in Data*. View
>online at https://ourworldindata.org/renewable-energy [online resource]
>~Nader, Laura. 2010 [1981]. Barriers to Thinking New About Energy. *In The Energy
>Reader*, Laura Nader, ed. Pp. 198-204. [Carmen]

Research: Presenting Findings—Posters

26)
Telling a New Story
Film: *Transition 2.0*
Readings:

~Korten, David C. 2021. Telling a New Story. In *The New Possible: Visions of our World Beyond Crisis*. Pp. 259-267. Eugene, OR: Cascade Books. [Carmen]

~Hopkins, Rob. 2019. Selections from *From What is to What If?* White River Junction, VT: Chelsea Green. **Introduction and Chapter 6 are required (Chapter 9 is optional).** [Carmen]

Research: Presenting Findings—Effective Speaking

27)
Wrap Up/Paper, Poster, & Presentation Guidelines/SARSES Certificate & Portfolio Discussion
Readings:

~Lent, Jeremy. 2021. Envisioning an Ecological Civilization. In *The New Possible: Visions of our World Beyond Crisis*. Pp. 3-12. Eugene, OR: Cascade Books. [Carmen]

Research: Group Work and Feedback

28)
Research Project Presentations & Peer Feedback
Readings: No required readings. Select resources to aid your project.

*Please bring a draft of your paper and poster and be ready to talk about your work!

29)
Research Project Presentations & Peer Feedback
Readings: No required readings. Select resources to aid your project.

*Please bring a draft of your paper and poster and be ready to talk about your work!

Final Examination:
FINAL RESEARCH REPORT AND POSTERSDUE
Public Poster Session and Celebration during final exam period

Capstone Research Project ~ Project Planning Guide

*Answering the following questions will help your team design a
robust, enjoyable, and impactful project:*

1) What is your team's topic? Select a socioecological systemic problem for which you would like to seek a solution.

2) What is the history of the problem you select? Attempt to place the problem in its historical context. How does understanding the problem's past influence and inspire potential solutions? You will learn more about this later, but it's helpful to have a rough idea.

3) Place the problem you select in its socioecological systemic context. How is it ecological? How is it social? How might these complexities shape the range of possible solutions?

4) Where can you turn to learn more about this problem and its potential solutions? Who in your network/community knows more about this issue and will be able to inform your thinking?

5) Brainstorm possible solutions to the problem: Aim for realistic, local solutions that could add up to make a global difference. As you learn more, you will develop a richer understanding of possible solutions.

6) How might you go about assessing the potential feasibility and efficacy of one or more solution? You may use survey, ethnographic, and/or experimental methods to test your ideas. You may also develop a pilot or prototype.

7) Are there elements of your solution that could be put in place in the real world? How? Where?

Research & Creative Inquiry Course Inventory

Overview
The GE allows students to take a single, 4+ credit course to satisfy a particular GE Theme requirement if that course includes key practices that are recognized as integrative and high impact. Courses seeking one of these designations need to provide a completed Integrative Practices Inventory at the time of course submission. This will be evaluated with the rest of the course materials (syllabus, Theme Course submission document, etc). Approved Integrative Practices courses will need to participate in assessment both for their Theme category and for their integrative practice.

Please enter text in the boxes below to describe how your class will meet the expectations of Research & Creative Inquiry Courses. It may be helpful to consult the Description & Expectations document for this pedagogical practice or to consult with the OSU Office of Undergraduate Research and Creative Inquiry. You may also want to consult the Director of Undergraduate Studies or appropriate support staff person as you complete this Inventory and submit your course.

Please use language that is clear and concise and that colleagues outside of your discipline will be able to follow. You are encouraged to refer specifically to the syllabus submitted for the course, since the reviewers will also have that document Because this document will be used in the course review and approval process, you should be *as specific as possible*, listing concrete activities, specific theories, names of scholars, titles of textbooks etc.

Accessibility
If you have a disability and have trouble accessing this document or need to receive it in another format, please reach out to Meg Daly at daly.66@osu.edu or call 614-247-8412.

Pedagogical Practices for Research & Creative Inquiry

Course subject & number

Performance expectations set at appropriately high levels (e.g. students investigate their own questions or develop their own creative projects). Please link this expectation to the course goals, topics and activities and indicate *specific* activities/assignments through which it will be met. *(50-500 words)*

Significant investment of time and effort by students over an extended period of time (e.g., scaffolded scientific or creative processes building across the term, including, e.g., reviewing literature, developing methods, collecting data, interpreting or developing a concept or idea into a full-fledged production or artistic work) Please link this expectation to the course goals, topics and activities and indicate *specific* activities/assignments through which it will be met. *(50-500 words)*

Interactions with faculty and peers about substantive matters including regular, meaningful faculty mentoring and peer support. Please link this expectation to the course goals, topics and activities and indicate *specific* activities/assignments through which it will be met. *(50-500 words)*

Students will get frequent, timely, and constructive feedback on their work, iteratively scaffolding research or creative skills in curriculum to build over time. Please link this expectation to the course goals, topics and activities and indicate *specific* activities/assignments through which it will be met. *(50-500 words)*

Periodic, structured opportunities to reflect and integrate learning in which students interpret findings or reflect on creative work. Please link this expectation to the course goals, topics and activities and indicate *specific* activities/assignments through which it will be met. *(50-500 words)*

Opportunities to discover relevance of learning through real-world applications (e.g., mechanism for allowing students to see their focused research question or creative project as part of a larger conceptual framework). Please link this expectation to the course goals, topics and activities and indicate *specific* activities/assignments through which it will be met. *(50-500 words)*

Public Demonstration of competence, such as a significant public communication of research or display of creative work, or a community scholarship celebration. Please link this expectation to the course goals, topics and activities and indicate *specific* activities/assignments through which it will be met. *(50-500 words)*

Experiences with diversity wherein students demonstrate intercultural competence and empathy with people and worldview frameworks that may differ from their own. Please link this expectation to the course goals, topics and activities and indicate *specific* activities/assignments through which it will be met. *(50-500 words)*

Explicit and intentional efforts to promote inclusivity and a sense of belonging and safety for students, (e.g. universal design principles, culturally responsible pedagogy). Please link this expectation to the course goals, topics and activities and indicate *specific* activities/assignments through which it will be met. *(50-500 words)*

Clear plan to market this course to get a wider enrollment of typically underserved populations.
Please link this expectation to the course goals, topics and activities and indicate *specific* activities/assignments
through which it will be met. *(50-500 words)*