Class mode
In person. Some class sessions may be held synchronously in Zoom, but these will be pre-announced.

Course description
In this course, we examine how humans perceive, interpret, as well as manage socioecological systems with the intent of sustainability. To do this we first consider the different ways in which science can be practiced and how this shapes environmental policy. We then examine the history of scientific ideas about ecological organization in order to better understand how they have informed policy over time. What does it mean today when we say an ecological system is ‘resilient’ or ‘complex’? How do the ways we conceptualize biodiversity matter for the policies that aim to protect and conserve it? A deeper understanding of policies that invoke sustainability is not just about having scientific knowledge about the environment and the organisms in it. Nor is it just a matter of having a specific kind of politics or economic perspective. It is also about learning some of the shared ways in which humans think, make choices, and respond to problems spanning individuals and society. Through ideas in anthropology, economics, psychology, geography, ecology and biology, students in this course will acquire a more sophisticated understanding of how humans conceptualize, manage, and anticipate their impacts in light of calls for sustainability.

Required materials
All readings are available online from the class home page. Students will also be expected to cover the cost of streaming two documentary film rentals. There is no textbook for the class.

COURSE CONTENT AND STRUCTURE

Objectives
Upon completion of this course students will be able to:
Understand how broad philosophical underpinnings of science shape environmental and sustainability policy
Describe how order and disorder have been perceived in ecology and recognize their influence on policy
Define a complex adaptive system and discuss how it provides a framework for environmental problem solving
Describe how human behavior and decision-making can be formally studied in relation to sustainability
Explain the different ways in which models and modeling are used to inform decisions about sustainability
Identify the ways in which we derive knowledge about future climate change and how they relate to policy
Identify how biodiversity is conceptualized and how this influences policies that highlight its importance
Describe practices originating out of environmentalist and ecomodernist goals of sustainability
Grading

Final letter grade is based upon the percentage of points you earn out of a possible 1110 points. The total number of points may vary slightly because of circumstances surrounding daily roll and in-class activity grades. Use the Google Sheet spreadsheets made available to you after each test to see your most accurate class grade.

<table>
<thead>
<tr>
<th></th>
<th>Points</th>
<th>%</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tests (5 at 100 points each)</td>
<td>500</td>
<td>≈40%</td>
<td>A (100 - 90%)</td>
</tr>
<tr>
<td>Daily roll and in-class activities (25 at 10 points each)</td>
<td>250</td>
<td>≈ 25%</td>
<td>B (80 - 89%)</td>
</tr>
<tr>
<td>Video assessments (4 and 50 points each)</td>
<td>200</td>
<td>≈20%</td>
<td>C (70 - 79%)</td>
</tr>
<tr>
<td>Reading/film/podcast questions (16 at 10 points each)</td>
<td>160</td>
<td>≈15%</td>
<td>D (60 - 69%)</td>
</tr>
<tr>
<td><strong>Total points</strong></td>
<td>1110</td>
<td></td>
<td>E (&lt;59%)</td>
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**Tests.** Tests are not cumulative. Each will cover all content from the lecture and the Powerpoint slides, as well as the readings, documentary films, and podcasts. Format will be a mixture of definition, short answer, and essay questions.

**Daily roll and in-class activities.** A grade will be taken each day. This may be based on attendance. It may also require you to complete an individual or a group activity in class or within a window of time after class. If you are absent and miss one of these grades, the missing grade persists until the end of the semester. I do not automatically add back missed attendance or activity points. At the end of the semester, I will assess your absence based on your entire attendance record as well as the quality and timing of any documentation you have provided me for your absence. Make sure to follow all attendance policies noted below.

**Video assessments.** Students are required to work in groups of four to five for each unit assessment. Each assessment will be organized around a set of questions given to each group. Group responses to these questions will be recorded in Zoom by one of the group members, and the URL for this video will be uploaded into Canvas for the instructor to watch and grade. Assessments are not cumulative and cover only the material since the last test. More detail will be presented in class on what is expected in these video unit assessments.

**Reading/film/podcast questions.** Each of the five units has a set readings, documentary films, and/or podcasts. Questions will be posted online in Canvas for students to complete outside of class.
COURSE UNIT TOPICS

Unit 1. The world viewed through sense, mind and context: where science and policy begin
How we sense and measure the world shapes science and how we attribute causality. Yet science itself is not one but many different kinds of knowledge practices that all occur within a social context. In this unit, we explore the underpinnings of how science is done in order to understand the ways in which it relates to environmental and sustainability policies.
Introduction
Philosophy and science
Scale
Sampling

Unit 2. Order, disorder, and complexity: science and policy as co-evolutionary dynamic
In this unit, we explore the nature of ecological change, and how our shifting understanding of it is central to making environmental policy and comprehending goals like sustainability. Change can be gradual and reversible as well as sudden and irreversible. Change is inherent to the world, thus policies that aim for sustainability must make educated guesses as to the trajectories of change that are probable, possible, and unforeseen.
Ecological order and disorder
Complex systems
Resilience theory
Adaptive management

Unit 3. Understanding prediction and human behavior for environmental policy
In this unit, we examine how we make assumptions about the future, an inherent facet of policy. To do this often requires working with incomplete information. Thus we are required to anticipate the future through models and modeling. Yet another aspect of policy must also be considered, that of human decision making and the ways in which we think and reason through situations that involve tradeoffs between the individual and society.
Cognitive biases and nudging
Game theory
Models and modeling
Climate change science and policy

Unit 4. Rethinking biodiversity and policy
Biodiversity policy is made upon a shifting understanding of what biodiversity is and how it works. In this unit we cultivate an understanding of the uncertainties and subjectivities of biodiversity, and how they have become enmeshed in current policies and practices
Limits to conservation policies
The Endangered Species Act
Reframing the idea of biodiversity
Megafauna conservation policies and discourses
Unit 5. Science and policy for the Anthropocene?
*In this unit we explore the tension between environmentalist versus ecomodernist policies that aim to address a growing number wicked problems. Technology, data-driven problem solving, market processes, and financial instruments are increasingly invoked in policy debates as to whether humans can have a good versus a bad Anthropocene.*

Environmentalism and ecomodernism
Algorithmic Earth
Financializing nature

COURSE POLICIES

Communication between teachers and students. Use this email address to contact your instructor: ja.stallins@uky.edu. Identify yourself by full name in all emails. You will receive emails from the instructors throughout the semester. Please check your UK email daily.

Attendance. Attendance will be taken each class meeting. Absences have to be announced ahead of time to receive any consideration as excused. Documentation has to be provided within one week of the absence.

If a course syllabus requires specific interactions (e.g., with the instructor or other students), in situations where a student's total excused absences exceed 1/5 (or 20%) of the required interactions for the course, the student shall have the right to request and receive a "W," or the Instructor of Record may award an "I" for the course if the student declines a "W." (Senate Rules 5.2.5.2.3.1). For this Spring 2022 course that meets on Tuesday and Thursday, that equates to five excused absences.

Excused absences and acceptable excuses. Excused Absences: Senate Rules 5.2.5.2.1 defines the following as acceptable reasons for excused absences: (a) significant illness, (b) death of a family member, © trips for members of student organizations sponsored by an educational unit, trips for University classes, and trips for participation in intercollegiate athletic events, (d) major religious holidays, (e) interviews for graduate/professional school or full-time employment post-graduation, and (f) other circumstances found to fit "reasonable cause for nonattendance" by the instructor of record.

Job fairs, family weddings, possession of airline tickets, and Greek events do not qualify as excused absences.

Students with chronic medical conditions that jeopardize attendance must go through UK Disability Services to have these absences documented. In other words, if you inform me you will be missing a lot of classes due to a mental or physical health condition, you will have to get this approved through UK Disability Services for these absences to be considered excused.

Documentation for funerals will require submission of the funeral announcement and obituary.

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays. Senate Rules 5.2.5.2.1(4) requires faculty to include any notification requirements within the syllabus. If no requirement is specified, two weeks prior to the absence is reasonable and should not be given any later.

University Health Services (UHS) recognizes the important public health and policy reasons why a sufficiently ill student ought to be absent from class and also not make a visit to UHS. UHS provides in this circumstance an "Explanatory Statement of Absence from Class" that students may complete and submit to the Instructor to document an excused absence from class. This is a UHS "Tier 1" document. Faculty will decide whether this Tier 1 document is acceptable as "appropriate verification" of the student's illness. Whether a Tier 1 excuse is acceptable will be decided in each individual circumstance, with the final decision contingent upon the student's overall attendance record and adherence to attendance policies for the semester.
The UHS Tier 2 document is an email sent to the student, at the student's request. The email confirms that the student made a medical visit to UHS. In order to provide the Instructor with verification of an illness, the student will forward the email from UHS to the Instructor of Record. The forwarded Tier 2 email informs the faculty member that she or he may confirm the UHS visit by emailing the identified sender of the confirming email and request that the sender verify the authenticity of the Tier 2 email sent to the student. Whether a Tier 2 excuse is acceptable will be decided in each individual circumstance, with the final decision contingent upon the student's overall attendance record and adherence to attendance policies for the semester.

The Tier 3 document emailed to students "states any applicable restrictions [on the student] based on illness or injury." Such a restriction may be that the student must be absent from class for a defined number of days. Whether a Tier 3 excuse is acceptable will be decided in each individual circumstance, with the final decision contingent upon the student’s overall attendance record and adherence to attendance policies for the semester.

Tier 2 and Tier 3 University Health Service (UHS) forms for excused absences include both the date the student was seen in the clinic as well as the date the student made an appointment.

Like the Tier 1 and 2 UHS forms, notes from doctors or medical clinics documenting a visit or appointment are not automatically considered an excused absence. The final decision is contingent upon the student’s overall attendance record and adherence to attendance policies for the semester.

Make-up work. All makeup work will be given during the last week of the semester. To be considered for makeup work, the absence must follow all guidelines to be considered excused, including prior notification of the absence, a record of overall attendance that does not cast suspicion on the validity of an excuse presented for an absence, and an excuse which falls within the university criteria and individual faculty criteria as acceptable excused absences.

Covid policies. All Covid-related issues must be disclosed to the UK Health Corps before any consideration of whether or not the absence is excused will be undertaken. The Self-Report home page for the UK Health Corps can be found at: https://hcselfreport.uky.edu/. Please forward all communications from the UK Health Corps to the instructor.

Masks are required to be worn in class. This is a campus policy. The university takes the health and safety of the campus community seriously. Those who continually fail to comply with guidelines, or those who deliberately fail to comply with the recommendations of medical professionals to self-isolate or quarantine may be suspended in order to protect the health and safety of the larger community.

The instructor reserves the right to change course policies and due dates in the event that Covid requires an alteration to the format in which the course was originally designed to be delivered.

Academic integrity. All work on quizzes and tests is expected to be done independently. Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the University may be imposed. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty.

All academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about a question of plagiarism involving their work, they are obliged to consult their instructors on the matter before submission.

Plagiarism (Senate Rules 6.3.1): When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording, or content from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism.

Plagiarism includes reproducing someone else's work (including, but not limited to a published article, a book, a website, computer code, or a paper from a friend) without clear attribution. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may
be, except under specific circumstances (e.g., Writing Center review, peer review) allowed by the Instructor of Record or that person's designee. Plagiarism may also include double submission, self-plagiarism, or unauthorized resubmission of one's own work, as defined by the instructor.

Students may discuss assignments among themselves or with an instructor or tutor, except where prohibited by the Instructor of Record (e.g., individual take-home exams). However, the actual work must be done by the student, and the student alone, unless collaboration is allowed by the Instructor of Record (e.g., group projects).

When a student's assignment involves research in outside sources or information, the student must carefully acknowledge exactly what, where and how he/she has employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain.

Cheating (Senate Rules 6.3.2): is defined by its general usage. It includes, but is not limited to, the wrongfully giving, taking, or presenting any information or material by a student with the intent of aiding himself/herself or another on any academic work which is considered in any way in the determination of the final grade. The fact that a student could not have benefitted from an action is not by itself proof that the action does not constitute cheating. Any question of definition shall be referred to the University Appeals Board.

Misuse of academic records (Senate Rules 6.3.3): Maintaining the integrity, accuracy, and appropriate privacy of student academic records is an essential administrative function of the University and a basic protection of all students. Accordingly, the actual or attempted falsification, theft, misrepresentation or other alteration or misuse of any official academic record of the University, specifically including knowingly having unauthorized access to such records or the unauthorized disclosure of information contained in such records, is a serious academic offense. As used in this context, "academic record" includes all paper and electronic versions of the partial or complete permanent academic record, all official and unofficial academic transcripts, application documents and admission credentials, and all academic record transaction documents. The minimum sanction for falsification, including the omission of information, or attempted falsification or other misuse of academic records as described in this section is suspension for one semester.

**Accommodations due to disability.** In accordance with federal law, if you have a documented disability that requires academic accommodations, please inform your instructor as soon as possible during scheduled office hours. In order to receive accommodations in a course, you must provide your instructor with a Letter of Accommodation from the Disability Resource Center (DRC). The DRC coordinates campus disability services available to students with disabilities. It is located on the corner of Rose Street and Huguelet Drive in the Multidisciplinary Science Building, Suite 407. You can reach them via phone at (859) 257-2754, via email (drc@uky.edu) or visit their website [https://www.uky.edu/DisabilityResourceCenter/](https://www.uky.edu/DisabilityResourceCenter/). DRC accommodations are not retroactive and should therefore be established with the DRC as early in the semester as is feasible.

**Zoom behavior policies.** Please enter Zoom through your UK Zoom account [https://uky.zoom.us/](https://uky.zoom.us/) or through the Zoom links available in Canvas. Do not use a public Zoom account. Students are to remain muted. Avoid the use of distracting photos and images on your Zoom account. Use your full student name, instead of nicknames, initials, first name only, phone name, or ID numbers. If you are not identifiable, then you may be kicked out of the Zoom.

**Title IV Compliance Requirements.** Federal regulation mandates that federal financial aid funds (Title IV) may only be disbursed to students who are actually enrolled and engaged in coursework. This regulation mandates that institutions provide evidence of engagement early in each semester. Failure to provide evidence includes sizeable fees and fines for the university. To comply with this mandate, all instructors of undergraduate and graduate courses (including lab courses), independent studies, online courses, and research credit) will be required to confirm student attendance or engagement in classes during the two-week period following the last day to add a class.

To comply with the new Title IV regulation, faculty will be required to report students for non-attendance/nonparticipation/non-engagement through the class roster in MyUK. Once a student is marked for nonattendance/non-participation/non-engagement in the class roster, the student will be dropped from the class and from
Canvas with a grade symbol "NA". If an undergraduate student drops below full-time, financial aid disbursement will be reduced. Courses dropped for non-attendance/non-participation/nonengagement will not appear on the student's transcript.

**Non-discrimination and Title IX policy.** In accordance with federal law, UK is committed to providing a safe learning, living, and working environment for all members of the University community. The University maintains a comprehensive program which protects all members from discrimination, harassment, and sexual misconduct. For complete information about UK’s prohibition on discrimination and harassment on aspects such as race, color, ethnic origin, national origin, creed, religion, political belief, sex, and sexual orientation, please see the electronic version of UK's Administrative Regulation 6:1 ("Policy on Discrimination and Harassment") ([https://www.uky.edu/regs/ar6-1](https://www.uky.edu/regs/ar6-1)).

In accordance with Title IX of the Education Amendments of 1972, the University prohibits discrimination and harassment on the basis of sex in academics, employment, and all of its programs and activities. Sexual misconduct is a form of sexual harassment in which one act is severe enough to create a hostile environment based on sex and is prohibited between members of the University community and shall not be tolerated. For more details, please see the electronic version of Administrative Regulations 6:2 ("Policy and Procedures for Addressing and Resolving Allegations of Sexual Assault, Stalking, Dating Violence, Domestic Violence, and Sexual Exploitation") ([https://www.uky.edu/regs/ar6-2](https://www.uky.edu/regs/ar6-2)). Complaints regarding violations of University policies on discrimination, harassment, and sexual misconduct are handled by the Office of Institutional Equity and Equal Opportunity (Institutional Equity), which is located in 13 Main Building and can be reached by phone at (859) 257-8927. You can also visit Institutional Equity's website ([https://www.uky.edu/eec](https://www.uky.edu/eec)).

Faculty members are obligated to forward any report made by a student related to discrimination, harassment, and sexual misconduct to the Office of Institutional Equity. Students can confidentially report alleged incidences through the Violence Intervention and Prevention Center ([https://www.uky.edu/vipcenter](https://www.uky.edu/vipcenter)), Counseling Center ([https://www.uky.edu/counselingcenter](https://www.uky.edu/counselingcenter)), or the University Health Service ([https://ukhealthcare.uky.edu/university-health-service/student-health](https://ukhealthcare.uky.edu/university-health-service/student-health)).

**Statement on Diversity, Equity, and Inclusion.** The University of Kentucky is committed to our core values of diversity and inclusion, mutual respect and human dignity, and a sense of community (Governing Regulations XIV). We acknowledge and respect the seen and unseen diverse identities and experiences of all members of the university community ([https://www.uky.edu/regs/gr14](https://www.uky.edu/regs/gr14)). These identities include but are not limited to those based on race, ethnicity, gender identity and expressions, ideas and perspectives, religious and cultural beliefs, sexual orientation, national origin, age, ability, and socioeconomic status. We are committed to equity and justice and providing a learning and engaging community in which every member is engaged, heard, and valued.

We strive to rectify and change behavior that is inconsistent with our principles and commitment to creating a safe, equitable, and anti-racist environment. If students encounter such behavior in a course, they are encouraged to speak with the instructor of record or the college's diversity officer, who is charged with addressing concerns about diversity, equity, and inclusiveness ([https://www.uky.edu/inclusiveexcellence/college-diversity-inclusion-officers](https://www.uky.edu/inclusiveexcellence/college-diversity-inclusion-officers)). Students may also contact a faculty member within the department, program director, the director of undergraduate or graduate studies, the department chair, or the dean. To submit an official report of bias, hatred, racism, or identity-based violence, visit the Bias Incident Support Services website ([https://www.uky.edu/biss/report-bias-incident](https://www.uky.edu/biss/report-bias-incident)).

**Student resources.** At UK, Academic Ombud Services ([https://www.uky.edu/ombud/](https://www.uky.edu/ombud/)) is responsible for resolving academic related problems and conflicts for which established procedures have not yielded a satisfactory solution or for which no established procedure exists. Academic Ombud Services is not intended to supplant the normal processes of resolution (contacting the course instructor, department chair, director of undergraduate/graduate studies, and/or associate dean). In cases where there is a clear need to achieve a solution more quickly than normal procedures provide, the Ombud may seek to expedite the process. The two major areas of activity for Academic Ombud Services involve student academic rights and violations of academic integrity. The primary task of Academic Ombud Services is to ensure fair polices, processes, and procedures, as related in the Senate Rules, are equitably implemented. Thus, Academic Ombud Services is a neutral office working as an advocate for fairness and equity.

The instructor is required to send alerts for students who are failing the course, not attending, or exhibiting behaviors that warrant a response from UK to ensure their safety and the safety of those around them. Please visit [http://www.uky.edu/studentacademicsupport/alert-process](http://www.uky.edu/studentacademicsupport/alert-process) for an explanation of how these alerts work. Students should report any disruptive, unsafe, or threatening behaviors of others in the classroom immediately.
A wide variety of resources are available to students at UK, including many that pertain to the health, well-being, and welfare of students. Please visit: https://www.uky.edu/universitysenate/student-resources

**Class recording.** The University of Kentucky Student Code of Conduct defines Invasion of Privacy as using electronic or other devices to make a photographic, audio, or video record of any person without their prior knowledge or consent when such a recording is likely to cause injury or distress.

All video and audio recordings of lecturers and class meetings, provided by the instructors, are for educational use by students in this class only. They are available only through the Canvas shell for this course and are not to be copied, shared, or redistributed.

As addressed in the Student Code of Conduct, students are expected to follow appropriate university policies and maintain the security of linkblue accounts used to access recorded class materials. Recordings may not be reproduced, shared with those not enrolled in the class, or uploaded to other online environments.

If the instructor or a University of Kentucky office plans any other uses for the recordings, beyond this class, students identifiable in the recordings will be notified to request consent prior to such use. In anticipation of such cases, students may be asked to complete an "authorization of use" form by a faculty member.

Video and audio recordings by students are not permitted during the class unless the student has received prior permission from the instructor. Any sharing, distribution, and or uploading of these recordings outside of the parameters of the class is prohibited. Students with specific recording accommodations approved by the Disability Resource Center should present their official documentation to the instructor.

**Intellectual property.** All content for this course, including handouts, assignments, and lectures are the intellectual property of the instructor and cannot be reproduced or sold without prior permission from the instructors. A student may use the material for reasonable educational and professional purposes extending beyond this class, such as studying for a comprehensive or qualifying examination in a degree program, preparing for a professional or certification examination, or to assist in fulfilling responsibilities at a job or internship.

**Prep week and reading days.** Per Senate Rules 5.2.5.6, the last week of instruction of a regular semester is termed "Prep Week." These rules permit continuing into Prep Week regularly assigned graded homework that was announced in the class syllabus. Class participation and attendance grades are permitted during Prep Week. However, no written examinations, including final examinations, may be scheduled during Prep Week. No quizzes may be given during Prep Week. No project/lab practicals/paper/presentation deadlines or oral/listening examinations may fall during the Prep Week unless it was scheduled in the syllabus and the course has no final examination (or assignment that acts as a final examination) scheduled during finals week.

The Thursday and Friday of Prep Week are study days (i.e., "Reading Days"). There cannot be any required "interactions" on a Reading Day. "Interactions" include participation in an in-class or online discussion, attendance at a guest lecture, or uploading an assignment. See Senate Rules 9.1 for a more complete description of required interactions.