



# ENVST 2050 – INTRODUCTION TO ENVIRONMENTAL SCIENCE SYLLABUS

## COURSE INFORMATION

**Instructor:** Dr. Jennifer Follstad Shah

**Unit:** School of the Environment, Society & Sustainability

**Email:** [jennifer.shah@ess.utah.edu](mailto:jennifer.shah@ess.utah.edu)  
(<mailto:jennifer.shah@ess.utah.edu>)

**Office:** Gardner Commons 4538

**Office Review the [Contact Me](#)**

**Hours:** (<https://utah.instructure.com/courses/972370/pages/contact-me>)\_page for more information

**Pronouns:** she, her, hers

**Teaching Assistant:** James Leifer

**Email:** [u1519981@utah.edu](mailto:u1519981@utah.edu) (<mailto:u1519981@utah.edu>)

**Pronouns:** he, him, his

**Pre-requisites:** None

**Credit Hours:** 3

**Semester:** Fall 2024

**Section** 001

**Time &** 12:25-1:45

**Location:** pm on  
Tuesdays &  
Thursdays,  
CTIHB 109

**Office:** TBA

**Office By Hours:** Appointment

*Note: This syllabus is meant to serve as an outline and guide for our course. Please note that it may be modified with reasonable notice to students. Any changes will be announced via email. You are responsible to regularly check the email address associated with your University profile.*



# COURSE DESCRIPTION

## COURSE SUMMARY

This course will provide a scientific foundation in Environmental Science. Although there are many social and political concepts critical to Environmental and Sustainability Studies, it is important to have literacy in some basic scientific principles and how they both inform our understanding of critical environmental challenges and help us to devise solutions to those challenges.

This course is designated as a Science Foundations (SF) general education course. It also is designated as a Sustainability Limited (SUS-L) course.

## COURSE OBJECTIVES

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

1. Interpret information in graphical and tabular formats;
2. Apply foundations of physics, chemistry, and biology to important issues in environmental science and the concept of sustainability;
3. Describe interconnections amongst life-supporting systems and how they relate to current events or public health;
4. Evaluate how various actions have contributed to regional and global environmental challenges;
5. Identify solutions, and their trade-offs, for sustaining biodiversity, resource availability, and environmental quality.

## REQUIRED MATERIALS


### Text

*A Changing Planet, 2<sup>nd</sup> Edition – required text*

This is an interactive e-textbook provided by REVEL (Pearson Publishing). The cost of the textbook has been included in the fees for this course. You can access the textbook through Canvas. Please refer to the **Revel** block of information found on the **Tech Help** (<https://utah.instructure.com/courses/972370/pages/tech-help>) page in Canvas for details.

### Canvas

All other course materials can be accessed online via the course website on Canvas.

Students are advised to familiarize themselves with Canvas at the start of the course. The **Canvas Student Orientation**  (<https://support.tlt.utah.edu/hc/en-us/articles/205654094>) materials can be helpful.

## TEACHING AND LEARNING METHODS

The instructor uses readings (from the textbook, scientific papers, and popular press), videos/animations, quizzes and exams, 'guided data explorations' and 'exploring solutions' exercises (found within chapters of the textbook), class discussion and interactive exercises, speaker engagements and tours of select campus locations to help students master the material presented in this course.

## TEACHING PHILOSOPHY

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I believe that three components are integral to a successful course: (1) academic inquiry is an evolving and creative process, (2) different learning styles should be incorporated into teaching techniques, and (3) critical thinking skills are the basis of an informed citizenry and new generations of professionals.

I have a nested hierarchy of teaching goals for students, depending on their respective career tracks. For **non-majors**, I hope to help them better understand pressing environmental issues and identify potential solutions to environmental challenges. I want these students to clearly understand fact from opinion, appreciate the role of science and technology for society, recognize the uncertainties of current scientific theory, identify environmental injustice, and embrace opportunities for achieving planetary sustainability. For **majors** planning to make a career in the fields of environmental science and sustainability, I intend to better prepare them for future coursework, instill in them the ability to apply principles and generalizations to new problems and situations, provide skills to critically analyze and synthesize data with which to make good decisions, and foster independent intellectual and experiential-based inquiry.

For **all students**, I encourage participation in student groups, student projects, and internships that help them to work on issues of most interest and gain a diversity of skills applicable to future career paths and engaged citizenry.

Open and critical discussion associated with the course material is welcomed and encouraged at all times. Students will have the opportunity to evaluate the course through surveys provided by the instructor and the University.

## CANVAS TIME ZONE INFORMATION

To ensure you are viewing due dates and times correctly, as well as events in the calendar, set your student Canvas time zone to your current location by following this [guide](#) 



<https://community.canvaslms.com/docs/DOC-10622-4212717410>.

If you do not change your time zone, all due dates and times listed in Canvas default to Mountain Time.

Content written by instructors, such as office hours written in the syllabus, is in Mountain Time unless stated otherwise.

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## COURSE EXPECTATIONS

This is a face-to-face course based on a flipped-classroom model. This means students are required to do ~ 3 hours of work outside of class each week completing assignments and preparing for class discussion. In the classroom, the instructor will review content from the textbook that student often find challenging and facilitate exercises and discussions to explore the material more deeply. Students also will be given class time to engage with guest speakers and collaborate on a group project. In short, it is crucial that students both do preparatory work in advance of coming to class and attending class discussions regularly.

## INSTRUCTOR EXPECTATIONS

Your instructor is committed to the following expectations for this course:

- The instructor will establish an inclusive course environment.
- The instructor will design the course to include lectures, readings materials, and assignments that will challenge students and will provide them with opportunities to learn and practice course content.
- The instructor will provide access to readings and assignments two weeks or more in advance of due dates.
- The instructor and teaching assistants will interact with the class via email (usually through Canvas), during office hours, individual appointments (as requested), instructions for assignments, feedback on assignments, quizzes, and exams, among other methods.
- The instructor will make exams available online for a 24-hour window within which students must complete each exam.
- The instructor and teaching assistant will provide feedback on assignments, quizzes, and exams promptly
- The instructor and teaching assistant will respond to emails promptly (within 1 business day; email responses may not occur over weekends).

- The instructor will notify the class of changes to the syllabus verbally as well as via email and Canvas announcements.
- Final grades will be posted for several days prior to posting them to the registrar's office to allow students the opportunity to have questions or concerns addressed.

## STUDENT EXPECTATIONS

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The following is expected of all students in this class:

- Students will engage with other students, teaching assistants, and the instructor respectfully and professionally at all times.
- Emails to the instructor and teaching assistant should include an **appropriate salutation** (i.e., Professor, Prof. Shah, Dr. Shah, name of TA). Emails that omit this salutation or use 'Hey' as a salutation are not respectful or professional.
- Students will confer with the course syllabus or the FAQs page on Canvas before sending an email to the instructor or TA with **general questions** about the course. Most often, answers to general questions can be found in the syllabus or on the **FAQs page** (<https://utah.instructure.com/courses/972370/pages/frequently-asked-questions-faqs>).
- Students will refer to the **overview content page** of each week's module, which lists the objectives for the chapter(s) assigned and assignments for the week. Relevant website links also will be included on this page.
- Students are responsible for completing assigned **exploring solutions activities, guided data exploration exercises, and chapter quizzes** embedded within the course textbook by the established due dates.
- Students are responsible for knowing the deadline of **quizzes and exams, required assignments, and extra credit assignments** posted in Canvas and completing these assignments by the established due dates.
- Students are expected to contact the instructor if a hyperlink is inactive or incorrect or if other technical difficulties arise. However, students are also encouraged to contact Canvas or Revel (textbook) technical support (see Canvas **Tech Help** (<https://utah.instructure.com/courses/972370/pages/tech-help>) page for contact information) when the difficulties seem to stem from these platforms.
- This course is in high demand. Hence, it benefits both you and other students to strongly consider whether you can commit to completing this class ideally before the last day for students to add classes without a permission code and the last day to add to the waitlist. Students can withdraw from courses without penalty within the first two weeks of class. Students with extenuating circumstances may withdraw from classes after this date by submitting a current term petition, available through the college of his/her/their major.
- Sometimes unforeseen, **extenuating situations** in life prevent students from performing well in class. In such situations, the instructor may reopen quizzes, exams, and assignments and allow

for full credit grading if documentation of the extenuating circumstance can be provided by the student to the instructor. It is best to notify the instructor of extenuating situations as early as possible so that we can devise a plan to get you back on track.

## OFFICE HOURS

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**Office hours** will occur in person, unless a Zoom meeting is requested by the student or instructor. Please see the **Contact Me** (<https://utah.instructure.com/courses/972370/pages/contact-me>) page for the day, time, and location of office hours.

## ETIQUETTE / NETIQUETTE

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Students are expected to follow the **core rules of netiquette** (<http://www.albion.com/netiquette/corerules.html>) at all times while participating in the class, interacting with other students, and communicating with the course instructor and teaching assistants.

This is a face to face course, so Zoom usage may be limited to just office hours (if at all). If Zoom is to be used, please follow these etiquette guidelines:

- Please mute your microphones when on Zoom unless you are speaking.
- Please turn off your camera if you need to take a bio break (e.g., eat, use restroom).
- Please position your camera so your face is the focus on the screen.
- Please sit up when in class rather than reclining on a couch, in bed, etc.
- Feel free to use a Zoom background if you feel uncomfortable showing the surroundings of the environment in which you are sitting.
- Please use earphones when in the Zoom meeting if you are in a public place, to protect the safe setting established for meetings.

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## EVALUATION AND GRADING

### SEMESTER GRADING SCHEME

Participation	Canvas quizzes, general discussions, reflections, surveys, extra credit	30%
Assignments	Revel quizzes, data explorations, exploring solutions activities (i.e., everything in REVEL)	30%
Facilitated		10%



Discussions		
Exams	Exams (4)	30%
		100%

## PARTICIPATION

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Class participation is an essential part of the learning process. Students are responsible for their learning and are required to actively participate in all components of the course. This is a face-to-face course, presented largely as a 'flipped classroom'. Students are expected to attend class regularly, complete assigned readings and watch (longer) videos BEFORE attending class (shorter videos may be presented in class), and finish assignments by established deadlines. This is particularly important when assignments include an interactive component amongst peers.

Class participation is based on completion of **quizzes and surveys, responses to discussion prompts, and other short assignments** (including extra credit) **posted on Canvas.**

**Additional short articles and videos** (including short lectures by the instructor) may be assigned each week. Links to this content will be available through Canvas. You may be asked to respond to a discussion prompt from these assigned materials for participation points. Main points from these resources can be included in exams.


**Extra credit** opportunities may be offered throughout the semester (e.g., attending relevant lectures on campus). Extra credit points will be added to participation points. Extra credit assignments will show '0' possible points' but you will be given points greater than 0 for these assignments, based on the number of points listed in the assignment description and your performance. Extra credit opportunities are a good way to improve your overall grade if you have not done well on exams or have missed taking a chapter quiz in Revel.

## ASSIGNMENTS

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Assignments include **exploring solution activities, guided data exploration exercises, and chapter quizzes in Revel.**

**Chapter quizzes** (found at the END of each chapter in *A Changing Planet*) are MANDATORY. Each quiz is worth 2 points per question. Students may take each quiz up to three times. The last (not best) score will be recorded in the grade book. Technical difficulties occur. Thus, it is best to take the chapter quizzes 1-2 days before the due date. Chapter quizzes are open for two weeks. Late quiz submissions will earn 50% of points earned and can be completed any time after the deadline.

Each chapter includes **mid-chapter module quizzes**, which are optional. These have no points. They are included merely as practice for students and to ensure that you are retaining the information you have read. 

Some chapters will include an **exploring solutions activity**. These activities are available through the course textbook and provide more experience conducting mathematical operations required to derive an appropriate course of action related to an environmental challenge. In-class discussions will build upon these exercises (e.g., relating the to local examples or surmising the implications of NOT mistaken calculations or data interpretations).

Many chapters will include a **guided data exploration exercise**. These exercises are available through the course textbook. Students are strongly encouraged to go through them independently to help reinforce class concepts. Reflection questions from guided data exploration exercises will be discussed in class. Material from these exercises may be included in exams.

## **FACILITATED DISCUSSION**

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Students will form discussion groups, that will meet face to face regularly throughout the semester. Membership within a discussion group will be determined the first week of class and remain constant throughout the semester.

Several class sessions will be devoted to class discussions, facilitated by student groups. Discussions will focus on readings or media related to a chapter of the textbook we have covered. Readings or media (e.g., video, blog or website) will fall into one of three categories: 1) a scientific paper or report, 2) a current event, or 3) a mitigation or adaptation strategy (aka 'solution'). Facilitators will choose the readings and media (with the help and authorization of the instructor) to be distributed at least one week prior to discussion via Canvas. Members in the group facilitating discussion will present to the class a brief summary of the selected piece, an acknowledgment of how the piece is related to the chapter of interest, and ~3 questions for the class to discuss. The facilitators will then moderate discussion posts on Canvas, synthesize common or salient points, and recap these points to the class. Facilitators also will be responsible for tracking time. Facilitators will have 20-25 minutes to present from introduction to recap because we will discuss a paper, a current event, and ways to address environmental challenges during each session discussions occur. Each student group will be facilitators once over the semester.

Student groups not tasked with facilitation will discuss questions related to assigned readings or media and post responses to these questions to Canvas during class, so facilitators can moderate the discussion amongst all groups.

More details and a rubric will be presented as part of a Canvas course module.



# EXAMS



There will be four **exams**. Any information presented in text chapters, guided data exploration exercises, labs, and other materials provided over the course website may be content covered in the exams. The final exam will NOT be cumulative. Exams will be taken online, via the Canvas course website. Each exam will be available for 24 hours, but you will have an allotted time to finish the exam once you start it. The time allotted is noted on each exam. Students with recognized accommodations may request additional time to complete each exam.

## UNIVERSITY OF UTAH GRADING SCALE

		A	100%-94%	A-	93.9%-90%
B+	89.9%-87%	B	86.9%-84%	B-	83.9%-80%
C+	79.9%-77%	C	76.9-74%	C-	73.9%-70%
D+	69.9%-67%	D	66.9%-64%	D-	63.9%-60%
E	59.9%-0%				


### **Notes on Grading – PLEASE READ CAREFULLY**

- Participation points for quizzes, guided data exploration exercises, and exploring solutions activities completed through the REVEL website (e-textbook) can be tracked via the REVEL website. These grades also will be integrated into Canvas to calculate your final grade.
- REVEL automatically sends grades to Canvas for each assignment. Grades are sent every day or two. Hence, you may see a '0' until you complete the assignment. Canvas will reflect the grade you earn once REVEL sends an update. The update may take up to a day to be seen in Canvas.
- The instructor rounds overall scores (i.e., percentages) to the nearest whole number before assigning letter grades. Please calculate what your letter grade would be when rounded BEFORE emailing the instructor about your final grade.
- Incompletes will only be given at the discretion of the professor and only if the student is passing at the time.
- If you need accommodation for special learning needs or athletics, please be sure to provide appropriate documentation at the start of the semester.

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## COURSE POLICIES

## TECHNOLOGY ISSUES AND TECH HELP

Your instructor has invested time before the start of the semester to ensure that the technologies used in this online class will operate smoothly. Nevertheless, technology doesn't always do what we want it to do! As such, this course has the following expectations regarding tech problems: 

- Students are **required** to contact the instructor immediately when they notice broken links or inaccessible files in the course. Links and files are assumed to work unless students indicate otherwise. Due to inaccessible links and files, points lost on assignments **cannot** be made up of students who did not notify the instructor of the problem before the assignment due date.
- The instructor is committed to fixing broken links and inaccessible files as soon as possible after being notified by the students. In the case that there will be a significant delay before these items can be fixed, the instructor will post an announcement to let the class know about the problem and to describe any alternate files/links or alternate due dates for assignments, if applicable, that students should be aware of.
- Students are responsible for submitting all assignments and activities by their due dates. In the very rare case that technical problems prevent a student from submitting an assignment, students are required to—
  - Immediately contact their instructor via email or the Canvas **Inbox**, to let them know about the problem and to submit a copy of their assignment as an attachment (where possible).
  - Then, immediately contact the Canvas help desk to troubleshoot and resolve the problem.
  - Submit an email updating the instructor on whether the problem was resolved and any additional steps the student or instructor must take to get the assignment properly submitted to Canvas.
- It is **not** appropriate to send an email to your instructor informing them about tech problems after an assignment due date.
- Students are expected to read all assignment instructions and to submit work in the required file formats. Work submitted as improper file formats will **not** be considered to have been handed in on time. The instructor will only grade work submitted using the proper file format.
- It is the student's responsibility to reach out to the appropriate help desk to troubleshoot and resolve tech problems in the course,

★ 24/7 help is available to all students via the  *Help* button in the far-left Canvas menu.

 For more detailed information about getting tech help, please review the information on the [Tech Help \(https://utah.instructure.com/courses/972370/pages/tech-help\)](https://utah.instructure.com/courses/972370/pages/tech-help) page of the course.

## LATE ASSIGNMENTS

Completion of **exploring solutions activities**, **guided data exploration exercises**, and **chapter quizzes** can occur past the due date for 50% of credit earned.

The instructor will NOT reopen **exams** that are not completed by the assigned due date. However, accommodation may be made to open exams before the assigned due date to students who can

provide evidence of a situation that precludes taking the exam during the window of opportunity provided to the entire class.



The instructor will NOT reopen other **assignments**, including **extra credit assignments**, once the deadline has passed, unless an extenuating circumstance can be documented.

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## INSTITUTIONAL POLICIES

All students and instructors are expected to adhere to the following university policies:

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### THE AMERICANS WITH DISABILITIES ACT

The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, (801) 581-5020. CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability Services.

**Accommodation Policy (see Section Q):** <http://regulations.utah.edu/academics/6-100.php>   
(<http://regulations.utah.edu/academics/6-100.php>)

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### UNIVERSITY SAFETY STATEMENT

The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message.

**For more safety information and to view available training resources, including helpful videos, visit [safeu.utah.edu](http://safeu.utah.edu) (<http://safeu.utah.edu>).**

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### ADDRESSING SEXUAL MISCONDUCT

Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the



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## DROP/WITHDRAWAL

Students may drop a course within the first two weeks of a given semester without any penalties. Students may officially withdraw (W) from a class or all classes after the drop deadline through the midpoint of a course. A “W” grade is recorded on the transcript and appropriate tuition/fees are assessed. The grade “W” is not used in calculating the student’s GPA. See the **[Academic Calendar](https://registrar.utah.edu/academic-calendars/index.php)**  (<https://registrar.utah.edu/academic-calendars/index.php>) for the last day to withdraw from the term, first, and second session classes.

**Deadlines for courses with irregular start and end dates policy:**

**<https://registrar.utah.edu/handbook/miscellaneous.php>** 

**(<https://registrar.utah.edu/handbook/index.php>)**

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## ACADEMIC MISCONDUCT & GENERATIVE AI

Academic misconduct, according to the University of Utah Student Code, *“includes, but is not limited to, cheating, misrepresenting one’s work, inappropriately collaborating, plagiarism, and fabrication or falsification of information...It also includes facilitating academic misconduct by intentionally helping or attempting to help another to commit an act of academic misconduct.”*

It is expected that students will adhere to generally accepted standards of academic honesty, including but not limited to refraining from cheating, plagiarizing, misrepresenting one's work, and/or inappropriately collaborating. This includes the use of generative AI tools without citation, documentation, or authorization. Students will also be expected to adhere to the prescribed professional and ethical standards of the profession/discipline for which the student is preparing. Any student who engages in academic dishonesty or who violates the professional and ethical standards for the profession/discipline for which the student is preparing, may be subject to academic sanctions.


**For detailed definitions and possible sanctions, see the Student Code:**


**<https://regulations.utah.edu/academics/6-410.php>**  (**<https://regulations.utah.edu/academics/6-410.php>**)

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## WELLNESS STATEMENT

Your personal health and wellness are essential to your success as a student. Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can

interfere with a student's ability to succeed and thrive in this course and at the University of Utah.  Please speak with the instructor or TA before issues become problems.

For helpful resources, contact the Center for Student Wellness at [www.wellness.utah.edu](http://www.wellness.utah.edu)  (<http://www.wellness.utah.edu>) or 801-581-7776.

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## VETERANS SUPPORT CENTER

The Veterans Support Center is a “one-stop-shop” for student veterans to find services, support, advocacy, and camaraderie. They are located in the Park Building Room 201.

You can visit their website for more information about their services and support at:

<http://veteranscenter.utah.edu>  (<http://veteranscenter.utah.edu>)

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## LGBT RESOURCE CENTER

The University of Utah has an LGBT Resource Center on campus. They are located in Room 409 of the Olpin Union Building. Hours: M-F 8-5 pm.

You can visit their website to find more information about the support they can offer, a list of events through the center, and links to additional resources: <http://lgbt.utah.edu> 

(<http://lgbt.utah.edu>).

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## LEARNERS OF ENGLISH AS AN ADDITIONAL/SECOND LANGUAGE

If you are an English language learner, please be aware of several resources on campus that will support you with your language and writing development.

These resources include:

Writing Center (<http://writingcenter.utah.edu>  (<http://writingcenter.utah.edu>))

Writing Program (<http://writing-program.utah.edu>  (<http://writing-program.utah.edu>))

English Language Institute (<http://continue.utah.edu/eli>  (<http://continue.utah.edu/eli>))

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## ABOUT THE U

As the only institution in the state classified in the highest research category (R1), at the University of Utah, you will have access to state-of-the-art research facilities and be able to be part of the knowledge creation process. You will have the opportunity to research your own with faculty who are leading experts in their field, engaging in programs that match your research interests. Further,

you will interact with and often take classes with graduate students that provide an advanced understanding of the knowledge in your field.



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## CSBS EMERGENCY ACTION PLAN

Not every online student comes to campus, but some do. Familiarize yourself with the [\*\*CSBS Emergency Action Plan\*\*](#)

(<http://content.csbs.utah.edu/~mli/CSBS%20Emergency%20Action%20Plan.pdf>) before you come to campus.

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## COURSE OUTLINE

The course is organized into 15 week-long modules, with a break included that coincides with the semester break. Students should view the Course Summary section below and the course [\*\*Modules\*\*](https://utah.instructure.com/courses/972370/modules) (<https://utah.instructure.com/courses/972370/modules>) to see the module schedule and assignment due dates.

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## SYLLABUS CHANGES

This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the Course Schedule to accommodate the needs of our class. Any changes will be posted to Canvas under [\*\*Announcements\*\*](#) (<https://utah.instructure.com/courses/972370/announcements>).

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## COURSE SCHEDULE

Items highlighted in blue are tentative

Week	Dates	Module & Topic	Participation & Assignment(s)	Exams
1	Aug. 20	In CANVAS: <i>Introduction to Environmental Science</i> module	In CANVAS: Quiz - Syllabus Scavenger Hunt Quiz; Extra Credit - Introduce Yourself	
	Aug. 22	In CANVAS: <b>Module 1: Science of Sustainability</b>	In CANVAS: Assignment - Evaluating Scientific Claims	



		In REVEL: <b>Chapter: <i>The Science of Sustainability</i></b>	In REVEL: Chapter Quiz; GDE: Understanding & Interpreting Graphs	
2	Aug 27	In CANVAS: <b>Module 2: <i>Science Fundamentals</i></b> In REVEL: <b>Chapter: <i>Science Fundamentals</i></b>	In CANVAS: Quiz - Planetary Boundaries & Doughnut Economics In REVEL: <b>no Chapter Quiz or GDE for module 2</b>	
	Aug 29	<b>NO CLASS</b>		
3	Sept 3	<b>NO CLASS</b>		
	Sept 5	In CANVAS: <b>Module 3: <i>Biodiversity &amp; Evolution</i></b> In REVEL: <b>Chapter: <i>Biodiversity &amp; Evolution</i></b>	In CANVAS: Discussion - Mass Extinctions & Endangered Species In REVEL: Chapter Quiz; GDE: Global Biodiversity & Threatened Species	
4	Sept 10	<b>Facilitated Discussions - Biodiversity</b>		



	Sept 12	In CANVAS: <b>Module 4: Populations &amp; Communities</b> In REVEL: <b>Chapters: Populations &amp; Communities</b> + excerpts from <i>Human Populations</i>	In CANVAS: Reflection – Keystone Species & Ecosystem Engineers In REVEL: Chapter Quiz; GDE: Population Growth Rates	
5	Sept 17	<b>Facilitated Discussions - Populations &amp; Communities</b>		
	Sept 19	In CANVAS: <b>Module 5: Ecosystems &amp; Biomes</b> In REVEL: Chapter: <i>Ecosystems &amp; Biomes</i>	In CANVAS: Greenstreets Quiz In REVEL: Chapter Quiz; GDE: Climate & Biomes	
	Sept 20	<b>Exam Day</b>		In CANVAS: <b>Exam 1 - online</b> (covers Modules 1- 4)
6	Sept 24	<b>Facilitated Discussions - Ecosystems &amp; Biomes</b>		
	Sept 26	In CANVAS: <b>Module 6: Biogeochemical Cycles</b> In REVEL: <b>Chapter: Biogeochemical Cycles</b>	In CANVAS: Reflection - Coupled Biogeochemical Cycles REVEL: Chapter Quiz; GDE: Variations in CO <sub>2</sub> concentrations; ES: Preventing	





			Future Pollution from S Fertilization	
7	Oct 1	In CANVAS: <b>Module 7: <i>Climate</i></b> In REVEL <b>Chapter: <i>Climate</i></b>	In CANVAS: <i>Extra Credit</i> – Questions for Guest Speaker (Climate Change) In REVEL: Chapter Quiz; GDE: The Effects of Changing Climate	
	Oct 3	In CANVAS: <b>Module 7: <i>Climate</i></b> (continued)		
8	Oct 8	<b>Fall Break</b>	<b>None – no class</b>	
	Oct 10	<b>Fall Break</b>	<b>None – no class</b>	
9	Oct 15	<b>Guest Speaker: Yusuf Jameel, Project Drawdown</b>		
	Oct 17	In CANVAS: <b>Module 8: <i>The Atmosphere &amp; Air Pollution</i></b> In REVEL: <b>Chapter: <i>The Atmosphere &amp; Air Pollution</i></b>	In REVEL: Chapter Quiz; GDE: pH & Global Sulfur Concentrations	
10	Oct 22	<b>Facilitated Discussion - Air Quality</b>		



	Oct 24	In CANVAS: <b>Module 9: Energy Use</b> In REVEL <b>Chapter: Energy Use</b>	In CANVAS: Quiz - Bid for the Big Grid In REVEL: Chapter Quiz; GDE: Energy Use	
	Oct 25	<b>Exam Day</b>		In CANVAS: <b>Exam 2 – online</b> (covers Modules 5-8)
11	Oct 29	In CANVAS: <b>Module 10: Non-Renewable &amp; Renewable Energy Resources</b> In REVEL: <b>TWO Chapters: Non-renewable Energy Resources &amp; Renewable Energy Resources</b>	In REVEL: <b>TWO</b> Chapter Quizzes; <b>TWO</b> GDE: Recoverable Fossil Fuels; Electricity from Renewable Sources; ES: Meeting Renewable Energy Targets	
	Oct 31	In CANVAS: <b>Module 10: Non-Renewable &amp; Renewable Energy Resources</b> (continued)		
12	Nov 5	<b>Facilitated Discussion - Energy Use &amp; Energy Sources</b>		
	Nov 7	In CANVAS: <b>Module 11: Waste Management</b>	In REVEL: Chapter Quiz; GDE: Global Waste Management;	












		In REVEL: <b>Chapter: Waste Management</b>	ES: Designing a Wastewater Treatment Plant	
13	Nov 12	<b>Facilitated Discussion - Waste Management</b> (with Freshwater focus)		
	Nov 14	In CANVAS: <b>Module 12: Freshwater</b> In REVEL: <b>Chapter: Freshwater</b>	In CANVAS: Assignment - Water Footprint Analysis In REVEL: Chapter Quiz; GDE: Stream Flow & Drought in Colorado River Basin; ES: Conserving Land for CleanWater	
	Nov 15	<b>Exam Day</b>		In CANVAS: <b>Exam 3 – online</b> (covers Modules 9-11)
14	Nov 19	In CANVAS: <b>Module 13: Agriculture &amp; Land Use</b> In REVEL: <u>TWO</u> <b>Chapters: Agriculture &amp; Land Use</b>	In REVEL: <u>TWO</u> Chapter Quizzes; GDE: Global Diets; GDE: Trends in Urbanization; ES: Restoring Soil Carbon in Grasslands with Grazing	
















	Nov 21	In CANVAS: <b>Module 13: Agriculture &amp; Land Use</b> (continued)		
15	Nov 26	<b>Facilitated Discussion - Agriculture &amp; Land Use</b>		
	Nov 28	<b>Thanksgiving Break</b>	<b>None - no class</b>	
16	Dec 3	In CANVAS: <b>Module 14: Oceans</b> In REVEL: <b>Chapter: Oceans</b>	In CANVAS: Discussion – Are Vertical Farms the Future of Agriculture & Aquaculture? In REVEL: Chapter Quiz; GDE: Global Fish Production, Consumption & Trade	
	Dec 5	<b>Facilitated Discussion - Oceans</b>	In CANVAS: Course Evaluations	
	Dec 13	<b>Exam Day</b>		In CANVAS: <b>Exam 4 - online</b> (covers



## Course Summary:

Date	Details	Due
Fri Aug 23, 2024	 <b><u>Module 1: Analysis - Evaluating Scientific Claims</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457855">https://utah.instructure.com/courses/972370/assignments/14457855</a>	due by 11:59pm
Fri Aug 23, 2024	 <b><u>Module 1: EXTRA CREDIT - Introduce Yourself</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457838">https://utah.instructure.com/courses/972370/assignments/14457838</a>	due by 11:59pm
Fri Aug 23, 2024	 <b><u>Module 1: Syllabus Scavenger Hunt Quiz</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457825">https://utah.instructure.com/courses/972370/assignments/14457825</a>	due by 11:59pm
Fri Aug 30, 2024	 <b><u>Module 2: Quiz - Planetary Boundaries &amp; Doughnut Economics</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457819">https://utah.instructure.com/courses/972370/assignments/14457819</a>	due by 11:59pm
Fri Aug 30, 2024	 <b><u>Module 3: Discussion - Evolution &amp; Extinctions</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457834">https://utah.instructure.com/courses/972370/assignments/14457834</a>	due by 11:59pm
Fri Sep 6, 2024	 <b><u>Module 4: Reflection - Keystone Species and Ecosystem Engineers</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457817">https://utah.instructure.com/courses/972370/assignments/14457817</a>	due by 11:59pm
Fri Sep 13, 2024	 <b><u>Exam 1</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457810">https://utah.instructure.com/courses/972370/assignments/14457810</a>	due by 11:59pm
Fri Sep 20, 2024	 <b><u>Extra Credit #1</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457845">https://utah.instructure.com/courses/972370/assignments/14457845</a>	due by 11:59pm
Fri Oct 18, 2024	 <b><u>Exam 2</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457823">https://utah.instructure.com/courses/972370/assignments/14457823</a>	due by 11:59pm

Date	Details	
Fri Oct 25, 2024	 <b><u>Module 9: Analysis - Water Footprint</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457858">https://utah.instructure.com/courses/972370/assignments/14457858</a>	due by 11:59pm
Fri Oct 25, 2024	 <b><u>Extra Credit #2</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457846">https://utah.instructure.com/courses/972370/assignments/14457846</a>	due by 11:59pm
Fri Nov 1, 2024	 <b><u>Module 11: Reflection - Vertical Farming</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457826">https://utah.instructure.com/courses/972370/assignments/14457826</a>	due by 11:59pm
Fri Nov 8, 2024	 <b><u>Survey - Anonymous Mid-Semester Feedback</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457827">https://utah.instructure.com/courses/972370/assignments/14457827</a>	due by 11:59pm
Fri Nov 8, 2024	 <b><u>Exam 4</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457822">https://utah.instructure.com/courses/972370/assignments/14457822</a>	due by 11:59pm
Fri Nov 15, 2024	 <b><u>Extra Credit #3</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457847">https://utah.instructure.com/courses/972370/assignments/14457847</a>	due by 11:59pm
Fri Nov 15, 2024	 <b><u>Module 13: EXTRA CREDIT: Reflection - 2023 Salt Lake County Watershed Symposium</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457851">https://utah.instructure.com/courses/972370/assignments/14457851</a>	due by 11:59pm
Thu Dec 5, 2024	 <b><u>Module 13: Quiz - Bid for the Big Grid</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457828">https://utah.instructure.com/courses/972370/assignments/14457828</a>	due by 11:59pm
Thu Dec 5, 2024	 <b><u>Exam 3</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457824">https://utah.instructure.com/courses/972370/assignments/14457824</a>	due by 11:59pm
Fri Dec 6, 2024	 <b><u>Extra Credit #4</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457848">https://utah.instructure.com/courses/972370/assignments/14457848</a>	due by 11:59pm
Fri Dec 6, 2024	 <b><u>Module 16: EXTRA CREDIT - Course / Teacher Evaluation</u></b> <a href="https://utah.instructure.com/courses/972370/assignments/14457854">https://utah.instructure.com/courses/972370/assignments/14457854</a>	due by 11:59pm
Fri Dec 6, 2024	 <b><u>Module 16: Graded Survey - Post Class Assessment</u></b>	due by 11:59pm

Date


Details



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<https://utah.instructure.com/courses/972370/assignments/14457815>

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 **[Padlet Example - do NOT publish!] Module 1: Discussion - Sustainability Key Words**

<https://utah.instructure.com/courses/972370/assignments/14457836>

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 **[Template] Module X: Assignment - Chapter Title**

<https://utah.instructure.com/courses/972370/assignments/14457865>

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 **[Template] Module X: Discussion - Topic**

<https://utah.instructure.com/courses/972370/assignments/14457837>

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 **Module 1: Discussion - Sustainability Key Words**

<https://utah.instructure.com/courses/972370/assignments/14457835>

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