**Syllabus information may be subject to change. The most up-to-date syllabus is located within the course in HuskyCT. Significant changes will be communicated to the class.**

**Course and Instructor Information**

**Course Title:** ENVE1000E Environmental Sustainability

**Class / Discussion Format:**

 **Lectures:** in-person lectures Monday/Wednesday in ROWE 122, 3:35pm to 4:25pm.

**Discussion:** in-person discussion each week unless otherwise noted; will post discussion materials in HuskyCT; complete if you miss in-person discussion – follow appropriate timeline

**Instructor:** Xingyu Wang

**Email & Best Practices:** xingyu.2.wang@uconn.edu (include ENVE1000E in subject line)

Review your message before you send it. Pay attention to your spelling and grammar and be sure your message makes the points you want to make concisely.

**Ask Questions:** Post questions to *Course Questions Forum* (HuskyCT Discussion Board).

I / your TA will respond to Forum questions and email within 24 hrs, M-F

**Office Hours:**  Monday and Wednesdays, 20 minutes before class and after lecture 4:25-5pm. Or by appointment with TA.

**TA:** Lais DaSilva, lais.dasilva@uconn.edu, office hours by appointment

**Required Course Materials**

**\*\*\*\*\*Required course materials should be obtained ASAP and not later than the end of week 1**.

**Textbook is free and reading is optional!** Theis and Tomkin (Eds) 2012. *Sustainability: A Comprehensive Foundation,* available on HuskyCT and at: [https://cnx.org/contents/F0Hv\_Zza@45.1:HdWd2hN5@2/Foreword](https://cnx.org/contents/F0Hv_Zza%4045.1%3AHdWd2hN5%402/Foreword)

The software/technical requirements for this course include:

* HuskyCT/Blackboard ([HuskyCT/ Blackboard Accessibility Statement](http://www.blackboard.com/Platforms/Learn/Resources/Accessibility.aspx), [HuskyCT/ Blackboard Privacy Policy](http://www.blackboard.com/footer/privacy-policy.aspx))
* [Adobe Acrobat Reader](http://www.adobe.com/products/acrobat/readstep2.html) ([Adobe Reader Accessibility Statement](http://www.adobe.com/accessibility/products/reader.html), [Adobe Reader Privacy Policy](http://www.adobe.com/privacy.html))
* Google Apps ([Google Apps Accessibility](https://www.google.com/accessibility/), [Google for Education Privacy Policy](https://www.google.com/edu/trust/))
* Microsoft Office (free to UConn students through [uconn.onthehub.com](https://uconn.onthehub.com)) ([Microsoft Accessibility Statement](http://www.microsoft.com/enable/microsoft/mission.aspx), [Microsoft Privacy Statement](https://privacy.microsoft.com/en-us/privacystatement/))

For information on managing your privacy at UCONN, visit the [University’s Privacy page](https://privacy.uconn.edu/).

**Course Philosophy and Description**

The overarching goal of this course is for students to begin a cognitive assessment of their own personal philosophies of ‘environmental sustainability’. Achieving a greater degree of environmental sustainability requires making educated choices. These choices, both personal and societal, can be guided by quantitative tools to assess environmental impacts (e.g., lifecycle analysis to consider resources used and wastes generated) and by the implementation of social or economic policies; however, the decision paths followed are guided implicitly by individuals’ and society’s choices, philosophies, and values.

**Course Description:** Detailed examination of anthropogenic impacts on the environment, resulting from the need for energy, food and shelter. Subtopics in the broad areas of energy, food and shelter will be grounded with case studies of UCONN activities/programs in sustainability as well as case studies of examples of urban and corporate sustainability efforts here in the US and abroad. Resolution of scientific/technological, public policy and economic aspects of environmental sustainability problems, including strategies for success, and possible pitfalls, in achieving environmental sustainability in the subtopic areas. This course fulfills general education requirements for area 2 (CA2) and for Environmental Literacy (E).

**Course Learning Objectives**

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

LO1. Correctly use the language of environmental sustainability, including physical science, technology, public policy, economics and sociology, *thereby becoming articulate about environmental sustainability*

* readings
* discussion & homework assignments
* exams

LO2. Identify interconnections between specific human activities/lifestyles and impacts upon the natural environment, *thereby acquiring intellectual breadth in scientific/technological, public policy, and economic facets of sustainability*

* readings
* discussion & homework assignments
* exams

LO3. Conduct necessary background research for a given environmental issue, *thereby acquiring skills to continue acquisition and use of knowledge*

* discussion & homework assignments

LO4. Perform critical evaluation of environmental problems using reasoned judgment and logical arguments, *thereby acquiring critical judgment about environmental sustainability*

* discussion & homework assignments

LO5. Demonstrate moral sensitivity about global societies and future generations, *thereby acquiring awareness of their era and society regarding global climate change and environmental degradation through all topics and increasing awareness of cultural diversity*

* discussion & homework assignments

**Common Curriculum Alignment**

The Common Curriculum prepares students to tackle 21st-century challenges by combining coursework across disciplines to expand their worldviews, enhance their range of skills, and develop into critical, creative, emotionally intelligent, and interdisciplinary thinkers. The Curriculum is designed to help students learn to be versatile in a rapidly changing world; combine knowledge in innovative ways; apply learning strategies to new contexts, including their major; see local and global patterns and the interconnectedness of intellectual work; and appreciate how we need each other to tackle today’s challenges.

The University has defined student learning objectives (what a student should know, be able to do, or attitudes/beliefs they should possess by the end of the course) for each Topic of Inquiry in the Common Curriculum. Each Common Curriculum course aligns to one or more of those objectives. The course’s student learning objectives align to the Common Curriculum objectives; course assessment (assignments, exams/quizzes, etc) align to both the course learning objectives and the Common Curriculum objectives.

|  |  |  |  |
| --- | --- | --- | --- |
| Topic of Inquiry | Common Curriculum objective | Course student learning objective(s) | Course assessment(s) |
| TOI-4 | 1. Students will be able to investigate how human activities impact Earth systems. | LO2 | Discussions, Homework Assignments, Exams |
| TOI-4 | 4. Students will be able to evaluate how public policies, legal frameworks, and/or other social systems affect environmental and social justice. | LO3, LO4 | Discussions, Homework Assignments |
| TOI-4 | 5. Students will be able to articulate moral, ethical, and/or philosophical issues regarding the environment. | LO4, LO5 | Discussions, Homework Assignments |
| TOI-5 | 1. Using theories and methods of social scientific and/or humanistic inquiry relevant to studying institutions and individual values, students will be able to critically and comparatively examine how individuals influence and are influenced by political, social, economic, and/or familial institutions.  | LO2, LO4 | Discussions, Homework Assignments |

**Course Requirements and Grading**

**Due Dates and Late Policy:** All course due dates are identified in the Class Schedule (see last two pages of this syllabus). Deadlines are based on Eastern Time; if you are in a different time zone, please adjust your submittal times accordingly. *The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be communicated in an appropriate manner.*

You are expected to turn in your assignment by the deadline. Late assignments will be penalized 20% for every day late past the due date unless you arrange an extension prior to the deadline. Extensions must be requested at least 48 hours before the deadline. There are no extensions/exceptions for scheduled exams.

If we get a big snowstorm or lose power, I will adjust the deadline for all students.

**Textbook and Readings**: Readings are noted on the course schedule and HuskyCT. Other readings and materials will be posted to HuskyCT. Textbook readings are ***optional*** and are provided to aid your deeper understanding of course topics. For exams, study the lectures and review your discussion and assignments.

**Feedback and Grades:** I will make every effort to provide feedback and post assignment grades within one week (or sooner) of the due date. To track your performance in the course, refer to My Grades in HuskyCT.

I will respond to questions posted to the *Course Questions Forum* (HuskyCT Discussion Board) and email within 24 hours, M-F

**Weekly Time Commitment:** You should expect to dedicate 6 – 9 hours per week to this course. This expectation is based on the various course activities, assignments, and assessments and UCONN’s policy regarding credit hours. For more information see, [UCONN Policies & Procedures](https://policy.uconn.edu/2012/08/22/credit-hour/).

**GRADING BREAKDOWN**

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| **Homework (HW) – 36%** |
| **HW #** | **Assignment Description** | **Points** | **Due Friday at 3:00 PM EST** |
| HW #1 | C-ROADS | 10 | February 10 |
| HW #2 | Footprint | 10 | March 3 |
| HW #3 | Food – Hunger | 5 | March 31 |
| HW #4 | Sustainable Cities | 5 | April 21 |
| **Discussion – 40%** |
| **Week**  | **Assignment Description** | **Points** | **Due End of Discussion or Sundays at 11:59pm EST** |
| 1 | Discussion #1: Motivation | 3 | 1/22, 11:59 pm |
| 2 | Discussion #2: Reading HW#1 | 3 | 1/29, 11:59 pm |
| 3 | Discussion #3: Ecological Footprint | 5 | 2/5, 11:59 pm |
| 5-6 | Discussion #4: Flint Water Crisis | 8 | 2/26, 11:59 pm |
| 8 | Discussion #5: Sustainable Ag | 5 | 3/19, 11:59 pm |
| 9 | Discussion #6: UCONN Dining | 8 | 3/26, 11:59 pm |
| 11 | Discussion #7: Urban Streets | 8 | 4/9, 11:59pm |
| 12-13 | Discussion #8: UCONN Stormwater | 8 | 4/16, 11:59 pm |
| **Exams (or IAD option) – 24%** |
| **Week**  | **Assignment Description** | **Points** | **Due** |
| 8 | Exam 1 (or IAD option) | 12 | March 8 |
| 15 | Exam 2 (or IAD option) | 12 | TBD |
| **Total = 100 points possible** |

**Description of Assignment Types:**

Homework: There are four homework assignments, one per theme area. Students typically have two weeks to complete each homework assignment. Access and submit homework via the *Homework* tab in HuskyCT. See course schedule for assignment availability and due dates.

Discussion: You have been assigned to your discussion section (001D, 002D, 003D) group for discussion assignments. I will post the discussion materials for those who may be unable to attend the in-person discussion. Follow the timeline associated with the assignments, generally due on Sunday/Monday at midnight. See course schedule for due dates.

Exams: There are two **in-person** exams in the course. A draft study guide will be made available during the first week of the course for Exam 1 and during Week 8 for Exam 2 in the *Exams* content area on HuskyCT. Both guides will be updated, if needed, one week before the exam. I will hold a review session prior to each exam. The *Exams* tab on HuskyCT will host all relevant materials.

This is an I-Course (see Inclusion Statement next section). As such, there are choices built into the course where students are given options to pick topics of interest (within Discussion Assignments) or to pick a different type of assessment (for the exams). The **Alternative Exam Option** is described under the *Exams* tab on HuskyCT. You must opt-in to complete the alternate assessment for Exam 1 by January 31 and for Exam 2 by March 21 and then adhere to the guidelines and milestones in the Alternative Exam Option document. You may opt-in to one or both alternative exams. Please contact me if you have questions or if you wish to opt-in.

**Inclusion Statement**

Our ENVE has the INCLUDE program team, an NSF-funded neurodiversity initiative that aspires to create an inclusive learning environment in which all students can thrive. Emphasis is given to providing a strengths-based approach to education that encourages students to identify, develop, and leverage their unique abilities to address complex engineering problems. This course was designed to address the diverse thinking and learning styles that neurodiverse students possess. Several pedagogical innovations will be implemented in this course including, but not limited to peer-learning (through discussion assignments), alternative examination modalities

**Technical Help**

[Technical and Academic Help](https://onlinestudent.uconn.edu/frequently-asked-questions/) provides a guide to technical and academic assistance.

**HuskyCT Help:** This course is facilitated using the learning management platform, [HuskyCT](http://huskyct.uconn.edu/). If you have difficulty accessing HuskyCT, you have access to the in person/live person support options available during regular business hours through the [Help Center](http://helpcenter.uconn.edu/). You also have [24x7 Course Support](http://www.ecampus24x7.uconn.edu/) including access to live chat, phone, and support documents.

**Student Responsibilities and Resources**

As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. Review these important [standards, policies and resources](https://onlinestudent.uconn.edu/learn--more/#POL), which include:

* The Student Code
	+ Academic Integrity
	+ Resources on Avoiding Cheating and Plagiarism
* Copyrighted Materials
* Credit Hours and Workload
* Netiquette and Communication
* Adding or Dropping a Course
* Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships
* Sexual Assault Reporting Policy

**Student Resources - Ask for Help if you need it**

Division of Student Affairs - [https://studentaffairs.uconn.edu](http://studentaffairs.uconn.edu/). If life circumstances are affecting your ability to focus on courses and your UConn experience, students can email the Dean of Students at dos@uconn.edu to request support. Regional campus students should email the Student Services staff at their home campus to request support and faculty notification. You may also email Dr. K with questions or concerns and she can help you access the resources and support you need.

The University of Connecticut is committed to supporting students in their mental health, their psychological and social well-being, and their connection to their academic experience and overall wellness. The university believes that academic, personal, and professional development can flourish only when each member of our community is assured equitable access to mental health services. The university aims to make access to mental health attainable while fostering a community reflecting equity and diversity and understands that good mental health may lead to personal and professional growth, greater self-awareness, increased social engagement, enhanced academic success, and campus and community involvement.

Students who feel they may benefit from speaking with a mental health professional can find support and resources through the[Student Health and Wellness-Mental Health](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fcounseling.uconn.edu%2F&data=02%7C01%7Cstacey.valliere%40uconn.edu%7C5c66eb15d4e740f9d2b608d84b624c01%7C17f1a87e2a254eaab9df9d439034b080%7C0%7C0%7C637342232831317172&sdata=CadHDIM%2FvVKSYDH63G%2FbG90ZMEuOw1dAn98J1MVq%2Bw4%3D&reserved=0)(SHaW-MH) office. Through SHaW-MH, students can make an appointment with a mental health professional and engage in confidential conversations or seek recommendations or referrals for any mental health or psychological concern.

Mental health services are included as part of the university’s student health insurance plan and also partially funded through university fees. If you do not have UConn’s student health insurance plan, most major insurance plans are also accepted. Students can visit the **Student Health and Wellness-Mental Health located in Storrs on the main campus in the Arjona Building, 4th Floor,** or contact the office at **(860) 486-4705, or** [https://studenthealth.uconn.edu/](https://nam10.safelinks.protection.outlook.com/?url=https%3A%2F%2Fcounseling.uconn.edu%2F&data=02%7C01%7Cstacey.valliere%40uconn.edu%7C5c66eb15d4e740f9d2b608d84b624c01%7C17f1a87e2a254eaab9df9d439034b080%7C0%7C0%7C637342232831327167&sdata=kmVgtKN9Je28yNH7gmRVuSaEZfcJEthWLwYFczKcaw4%3D&reserved=0) **fo**r services or questions**.**

**Students with Disabilities**

The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or<http://csd.uconn.edu/>.

Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government.” (Retrieved March 24, 2013 from [Blackboard's website](http://www.blackboard.com/platforms/learn/resources/accessibility.aspx))

**Minimum Technical Skills**

To be successful in this course, you will need the following technical skills:

* Use electronic mail with attachments.
* Save files in commonly used word processing program formats.
* Copy and paste text, graphics or hyperlinks.
* Work within two or more browser windows simultaneously.
* Open and access PDF files.
* Open and navigate through online textbook, navigate HuskyCT, complete online assignments and exams, etc.
* Proficient in Microsoft Excel or gain proficiency in Microsoft Excel
* Download and install relevant software

University students are expected to demonstrate [Computer Technology Competencies](http://geoc.uconn.edu/computer-technology-competency/).

**Evaluation of the Course**

Students will be provided an opportunity to evaluate instruction in this course using the University's standard procedures, which are administered by the[Office of Institutional Research and Effectiveness](http://www.oire.uconn.edu/) (OIRE).

Additional informal formative surveys may also be administered within the course as an optional evaluation tool.

**Course Outline and Schedule**

Wk 1: Overview – What is sustainability?

* + Sustainability definitions; sustainability science
	+ Recognize system boundaries

Wk 2 – 4: Energy & Climate

* Understand the difference between weather and climate
* Explain the connection between energy generation and climate change
* Examine different methods of electrical power generation
* Examine economic, policy and other drivers to promote adoption of more sustainable practices
* Analyzed different actions and their impact on climate

Wk 5 - 7: Water & Ecosystems

* Understand water cycle, uses, and sustainability challenges
* Understand virtual/embedded water concept
* Learn and apply water footprint
* Understand mechanisms to address water sustainability challenges and difficulty of accounting for environment or equity issues

Wk 8 - 10: Food Systems

* Understand food systems and sustainability challenges
* Analyze sustainability concepts in organic vs. local food
* Understand mechanisms to address food system sustainability challenges

Wk 11-14: Urban Systems

* Describe patterns of land use
* Identify why development patterns are not sustainable
* Compare and contrast low impact design elements
* Examine public policy drivers to promote more sustainable development practices

Wk 15: Wrap-up

| ***COURSE SCHEDULE*** |
| --- |
| ***Week #******Start Date*** | ***Textbook Readings******(optional)*** | ***In-Person Lectures – M/W 3:35-4:25pm EST***ROWE 122 | ***In-Person Discussion (Th/F/F)*** *see Student Admin Schedule for room* | ***What is Due This Week?***  |
| ***Monday*** | ***Wednesday*** |
| ***Overview – What is Sustainability?***  |
| ***Week 1****Jan. 17* | *N/A* | *Martin Luther King Holiday****No Lecture*** | Course overview & intro to sustainability | **Discussion #1: Motivation**  | ***Discussion #1* DUE: Sun., Jan. 22** |
| **Energy & the Changing Climate** |
| **Week 2** Jan. 23  | Ch. 1Ch. 3, pgs. 50-63, 76-88, 98-115Ch. 8, pgs 303-308, 337-351, 384-399 | Broad overview & history of energy system; challenge of scale | Energy – climate connection; Overview of climate system & GHGs**HW #1: C-ROADS** intro | **Discussion #2: Reading for HW#1.** Read Background Materials and Strategies | ***Discussion #2* DUE: Mon., Jan. 30** |
| **Week 3** Jan. 30 | A changing climate – future projections and mitigation | A changing climate – future projections and mitigation  | Watch Footprint Video **Discussion #3: Ecological Footprint**  | ***Discussion #3*: End discussion or by Feb. 5** |
| **Week 4** Feb. 6 | Mitigation, climate momentum | UCONN CAP; Adaptation; concept of non-stationarity Discuss HW#1 | *No discussion* | ***HW#1* DUE: Fri., Feb. 10** |
| **Water and Ecosystems** |
| **Week 5** Feb. 13 | Ch. 4, pgs 117 - 134Ch. 5, pgs 151 – 179, 184 - 209 | Broad overview of water/ecosystems challenges  | Efforts to mitigate challenges – theory**HW #2: Footprint** | Read/Watch Flint Water Crisis **Discussion #4: Flint Water Crisis** | *N/A* |
| **Week 6** Feb. 20  | Efforts to mitigate challenges – applications/tools | Efforts to mitigate challenges – applications/tools  | Complete Discussion #4 | ***Discussion #4*  End discussion or by Feb. 26** |
| **Week 7** Feb. 27 | Sustainability CT Water SystemsUCONN Water Reclamation Facility | Wrap-up Water & Ecosystems and Discuss HW# 2 | *Review for Exam 1* | ***HW#2* DUE: Fri., Mar. 3** |

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| **Week #****Start Date** | **Textbook Readings****(optional)** | ***In-Person Lectures – M/W 3:35-4:25pm EST***UTEB 175 | ***In-Person Discussion (Th/F/F)*** *see Student Admin Sched. for rooms* | ***What is Due This Week?***  |
| **Monday** | **Wednesday** |
| **Food Systems** |
| **Week 8**Mar. 6 | Ch. 4, pgs 135-147 Ch. 10, pgs. 501-502, 506-508 | Overview of food system and challenges **HW#3 FOOD** | **Exam 1** | **Discussion #5: Sustainable Agriculture** | ***Discussion #5* End discussion or by Mar. 19** |
| **Week 9** | **Enjoy Spring Break March 12 - 18** |
| **Week 10**Mar. 20 | Sustainable agricultural production | Food Waste & Hunger continued.  | **Discussion #6: UCONN Dining Services** | ***Discussion #6* End discussion or by Mar. 26** |
| **Week 11**Mar. 27 | (Un)sustainable agricultural production continued. | Food Waste & Hunger | *No discussion* | ***HW#3* DUE: Fri., Mar. 31** |
| **Urban Systems: Green Building & Livable Cities** |
| **Week 12** Apr. 3 | Ch. 11, pp. 525-547 | Wrap up food systems | Intro urban systems/challenges urban car centric/human centric **HW#4: Sust. Comms**  | **Discussion #7: Urban Streets** | ***Discussion #7* End discussion or by Apr. 9** |
| **Week 13**Apr. 10 | Livable cities | Wrap-up livable cities start green building and LID | **Discussion #8: Sustainable UCONN Stormwater Management** | ***Discussion #8* End discussion or by Apr. 16** |
| **Week 14**Apr. 17 | Green building and LID continued; UCONN green buildings | Wrap-up Green Building and discuss HW#4 | *No discussion – optional tour?* | ***HW#4* DUE: Fri., Apr. 21** |
| **Wrap-up** |
| **Week 15**Apr. 24 | None | Review for Exam 2 | **Exam 2**  | SEMESTER ENDS. |