

**SUST 401: Surveying Sustainability**  
Fall 2017  
M/W 11:10-12:30 in Morrill Hall, room 204

**Prof. Vanessa Levesque**

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Office Hours: Mondays 1-2 pm, Wednesdays 10-11 am, and by appointment

**Required Text:** Sustainability Principles and Practice by Margaret Robertson, Routledge (2014). Also available electronically through the UNH Library System.

**Course Overview:**

In this course, we focus on discovering what sustainability means, understanding the challenges to achieving it, and exploring solutions that meet sustainability goals. SUST 401 is divided into two modules. Module 1 is an orientation to interdisciplinary approaches to sustainability, with an exploration into several sustainability grand challenges. The multiple meanings of sustainability are discussed and assessed. As sustainability is a cross-disciplinary field of study and practice, this foundation requires intellectual breadth: understanding human interests, ethics, and history requires the humanities; measuring and assessing sustainability requires knowledge of the natural, biological and social sciences; and building solutions requires insight into systems of all kinds. Sustainability grand challenges are challenges that are common to many sustainability debates. This course explores several of these challenges from interdisciplinary perspectives.

Module 2 is a place-based exploration of specific sustainability issues and debates as they present themselves at UNH, the broader region, national and international scales. Students develop an understanding of the complexity of social-ecological systems, applying knowledge from the first half of the semester to analyze the solutions to these specific sustainability challenges. This module will use a case-study approach to understand, analyze, critique and ultimately create new ideas around sustainability problems and solutions at multiple scales. An overarching course theme is connecting knowledge with action. The course will use this lens to explore sustainability solutions throughout the semester using readings and class discussion.

**Learning Objectives:**

- Explore the definition and history of the concept of sustainability
- Understand the ecological foundations of sustainability
- Understand the social and economic foundations of sustainability
- Examine how specific grand challenges in sustainability are related to problems in the ecological, social or economic foundations
- Identify and analyze sustainability case studies at local, regional and global scales
- Engage with the challenges of sustainability on and beyond the UNH campus
- Explore solutions to sustainability solutions that address ecological and social components
- Enhance written and oral communication skills

**Office of Disability Services:** The University is committed to providing students with documented disabilities

equal access to all University programs and facilities. If you have a disability requiring accommodations, you must register with Disability Services for Students (DSS) at 201 Smith Hall, 603.862.2607 or [disability.office@unh.edu](mailto:disability.office@unh.edu). If you have received Accommodation Letters for this course from DSS, please provide me with that information privately and as soon as possible so that we can ensure timely implementation of those accommodations.

**Academic Honesty:** Please review the UNH Academic Honesty Policy: <https://www.unh.edu/student-life/handbook/academic/academic-honesty>. The *American College Dictionary* defines plagiarism as “Copying or imitating the language, ideas, or thoughts of another author and passing off the same as one’s original work.” Paraphrases, even if not exact quotations, must have the appropriate citation. Exact quotations must have quotation marks and the appropriate citation. Using the Internet for research is allowed, but plagiarizing its resources is not allowed; all references must be cited. As a general rule, *if you have any doubts, give credit to the source*; if you have any questions, talk to the instructor.

**Electronic Devices Policy:** Per section 04.213 of the *Student Rights, Rules, and Responsibilities Handbook*, cell phones, music players, or any other type of electronic device may not be used during class, without specific prior approval. Please make sure your phone is set to silent mode or turned off. Texting or any other messaging is strictly forbidden. Laptops may be used for note-taking and reference to electronic class readings; laptops used for any other purposes will result in you losing the privilege of using your laptop during class.

#### Course Requirements & Grading:

Participation assignments (23 x 5 pts each)	115
First exam	100
Final exam	100
Personal action project	
Project plan	25
Project journal & reflection	100
Project presentation	50
TOTAL POINTS	485

Participation assignments:

- You will be given small assignments to prepare in advance of most classes based on a reading, video or reflection of prior course material.
  - You need to submit your assignment online by the start of class using Canvas. This is your “pass” to get into class that day.
  - These assignments cannot be handed in late because the purpose of the assignment is to prepare you for that day’s class. Late submissions will not be accepted.
  - These assignments will be worth 5 points each. *Full credit is only possible if you attend and participate in class on the day the assignment is due. If you are absent, you may still do the assignment for a maximum of 3 points (or use a free pass – see below)*
- You get two “free passes” during the semester to use instead of completing a participation assignment.
  - You may use a free pass if you miss class for any reason (sickness, travel, etc.) or if you are simply behind in your work.
  - To use a free pass, type “Free Pass #1” or “Free Pass #2” where you would normally submit

- o your assignment on Canvas.
- o **If you do not submit a “Free Pass #1/2” on Canvas by the due date & time, you will receive a zero for a missed assignment.**
- o After your two free passes are used up, you receive a zero for any participation assignment not handed in on time. Because I provide these passes, I do not make additional exceptions for missed assignments.

**Personal Action Project:**

This is an opportunity to explore what it means to take personal action towards a more sustainable world. You will create a plan early in the semester, keep a journal of the actions you take, and write a reflection about your experience. Finally, you will share your experience with the class at the end of the semester.

- More details will be provided to you in a separate document a few weeks into the semester.
- A 1-page motivation and plan for your project will be due a week after the first exam. I will provide feedback to you based on plan to help ensure you are on the right track.
- You will share your experience with everyone in the last 2 classes. You can use any method you choose to do so (powerpoint, videos you took during the semester, physical objects, etc.).

**Exams:**

- The first exam will cover Module 1
- The final exam will cover Module 2

**Schedule of course readings, assignments and exams**  
*This is subject to change. Please see Canvas for updated schedule and assignments.*

Date	Topic	Readings & Assignments due at start of class
<i>Module 1: Orientation to Sustainability &amp; Grand Challenges</i>		
8/28	Introduction	
8/30	Defining sustainability	<ul style="list-style-type: none"> <li>• Robertson, chapter 1: What is Sustainability</li> <li>• Revise your definition of sustainability</li> </ul>
9/6	History of sustainability	<ul style="list-style-type: none"> <li>• Robertson, Chapter 2: A Brief History of Sustainability</li> <li>• Research one term, person, event or publication mentioned in Chapter 2 &amp; write a paragraph on it</li> </ul>
9/11	Environmental sustainability	<ul style="list-style-type: none"> <li>• Ecosystems (sections 1-4, pg. 1-16 only), Unit 4 in The Habitable Planet  <a href="https://www.learner.org/courses/envsci/unit/pdfs/unit4.pdf">https://www.learner.org/courses/envsci/unit/pdfs/unit4.pdf</a></li> <li>• Answer the questions on Canvas about ecological concepts.</li> </ul>
9/13	Environmental threats	<ul style="list-style-type: none"> <li>• Robertson, Chapter 8: Ecosystems and Habitat</li> <li>• In the Chapter Review at the end of Chapter 8 on p.133, answer questions 1-6</li> </ul>
9/18	Economic	<ul style="list-style-type: none"> <li>• Robertson, Chapter 4: The Human Sphere (p. 47-54 only)</li> </ul>

	sustainability	<ul style="list-style-type: none"> <li>• What is one way that we measure economic well-being at a national scale? Please explain your response.</li> </ul>
9/20	Social sustainability	<ul style="list-style-type: none"> <li>• Bostrom, 2012. A missing pillar? Challenges in theorizing and practicing social sustainability. Sustainability: Science, Practice &amp; Policy. (Table 1 only!)</li> <li>• Murphy, K. 2012. The social pillar of sustainable development: a literature review and framework for policy analysis. Sustainability: Science, Practice &amp; Policy. (Read the section called, "A Social/Environmental Framework", including Table 4, pg. 20-25)</li> <li>• In your own words, what do you think social sustainability means and aims to achieve?</li> </ul>
9/25	Social & Environmental Justice	<ul style="list-style-type: none"> <li>• Find and write about an environmental justice – full description on Canvas</li> </ul>
9/27	Systems thinking applied to sustainability	<ul style="list-style-type: none"> <li>• Anderson and Johnson. Systems Thinking Basics, Section 1 "What Are Systems" (pg. 1-10; don't do activities) and Section 2 "What is Systems Thinking" (pg. 17-22; no activities)</li> <li>• Answer the questions about systems posted on Canvas.</li> </ul>
10/2	Sustainability Grand Challenge: The Amazon	<ul style="list-style-type: none"> <li>• Schiffman, R. 2015. Amazon deforestation soars after a decade of stability</li> <li>• In what ways is this a sustainability challenge that incorporates all three pillars (environment, economic, social)?</li> </ul>
10/4	First exam prep	<ul style="list-style-type: none"> <li>• Come up with one question per major topic area (due by 9am!)</li> </ul>
10/9	<b>First Exam</b>	

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**Module 2: Sustainability Case Studies Across Scales**

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10/11	Food & Ag Introduction	<ul style="list-style-type: none"> <li>• Robertson, Chapter 13: Food</li> <li>• Answer questions on Canvas about the impacts of food production</li> </ul>
10/16	Food & Ag solutions	<ul style="list-style-type: none"> <li>• 50 by 60: A New England Food Vision (Executive Summary)</li> <li>• Find a website of a sustainable agriculture or food example in New England. Submit it by 10 am.</li> </ul>
10/18	Aquaponics Field trip	<ul style="list-style-type: none"> <li>• Briefly describe aquaponics. What is one benefit and one challenge with aquaponics?</li> </ul>
10/23	Water overview	<ul style="list-style-type: none"> <li>• Robertson, Chapter 7: Water</li> <li>• What surprised or interested you the most from this chapter and</li> </ul>

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		why? Be specific.
10/25	UNH Stormwater Center tour	<ul style="list-style-type: none"> <li>Post field-trip reflection due tomorrow at 9pm</li> </ul>
10/30	Climate change	<ul style="list-style-type: none"> <li>Read Robertson, Chapter 6: Climate</li> <li>Answer any 6 questions from the Chapter Review on pg. 91.</li> </ul>
11/1	Climate change	<ul style="list-style-type: none"> <li>Attend at least one of the speakers about Arctic Climate Change (see schedule at: <a href="https://mypages.unh.edu/arctic-change/home">https://mypages.unh.edu/arctic-change/home</a>) and write up summary as described on Canvas.</li> </ul>
11/6	Climate Change Guest Speaker Liz Burakowski	<ul style="list-style-type: none"> <li>Climate Impacts on the Winter Tourism Economy in the US (<i>on Canvas</i>)</li> <li>The Dollars &amp; Sense of Sustainability (<i>on Canvas</i>)</li> <li>Based on the reading, write down one question for guest speaker. Ask your question in class if you have a chance!</li> </ul>
11/8	Energy introduction	<ul style="list-style-type: none"> <li>Christensen, Chapter 15: Nonrenewable Energy (<i>on Canvas</i>)</li> <li>Answer questions about nonrenewable energy sources posted on Canvas.</li> </ul>
11/13	Energy solutions – renewables, efficiency	<ul style="list-style-type: none"> <li>Robertson, Chapter 10: Energy (pg. 163 - 180 only)</li> <li>Choose one renewable energy source and answer the questions on Canvas.</li> </ul>
11/15	Energy solutions field trip: UNH Co-Gen plant	<ul style="list-style-type: none"> <li>Field trip to UNH Combined Heat &amp; Power Facility</li> <li>Post field-trip reflection due tomorrow by 9pm</li> </ul>
11/20	Municipal planning and policy	<ul style="list-style-type: none"> <li>Read: Robertson, Chapter 12: Livable Cities</li> <li>Personal action project journal and reflection paper due today</li> </ul>
11/27	Present towns sustainability efforts	<ul style="list-style-type: none"> <li>Research example of a sustainable action in your hometown. Details on Canvas.</li> </ul>
11/29	Personal action project presentations	<ul style="list-style-type: none"> <li>Prepare your presentation; send any digital materials (e.g. video, powerpoints, etc) to Vanessa by midnight on Tue. 11/28</li> </ul>
12/4	Personal action project presentations	<ul style="list-style-type: none"> <li>Prepare your presentation; send any digital materials (e.g. video, powerpoints, etc) to Vanessa by midnight on Sun. 12/3</li> </ul>
12/6	Wrap-up	<ul style="list-style-type: none"> <li>Final Exam preparation assignment on Canvas</li> </ul>

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