

# SUST 101 – Introduction to Sustainability Studies

Time: MWF 9:00-9:50

Location: CAS 157

Instructor: Dr. Loren B. Byrne

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Office Hours: Mon., Tue. &amp; Fri. 11am-12pm, Th. 1-2pm, or by appointment

## Quotes that summarize Dr. Byrne's teaching & learning philosophy:

*"The mind is not a vessel to be filled but a fire to be kindled."* ~ Plutarch

*"Teachers open the door. You must enter by yourself."* ~ Chinese proverb

*"(Intelligence) is 1% inspiration and 99% perspiration."* ~ Thomas Alva Edison

*"Today a reader, tomorrow a leader."* ~ W. Fusselman

*"When we try to pick out anything by itself, we find it is tied to everything else in the universe."* ~ John Muir

*"High-quality learning is absolutely essential for high-quality living."* ~ L. Dee Fink

## Course Description:

Sustainability Studies is a transdisciplinary field that examines the interrelated environmental, economic, social and technological problems facing humans at local, regional and global scales. This course provides an introductory survey of the concepts, principles and tools from diverse fields that contribute to understanding and responding to problems such as climate change, environmental degradation, and social inequalities. The course introduces perspectives from the natural and social sciences, arts and humanities, and professional disciplines and explores how their interconnection increases the prospects for creating a more sustainable future. Specific topics to be explored include: paradigms and worldviews; quantitative systems thinking and analysis; principles of ecology, physics and economics; energy and natural resource and conservation; cultural sustainability; environmental politics and justice; ethics and religion; sustainable agriculture; green design; and the roles of the arts.

**WARNING:** *This course is reading, writing and discussion intensive.* This is not because the professor wants to give you "busy" work. Rather, these activities will promote your deeper learning of the course content.

## Course goals/outcomes:

Students will gain foundational knowledge and understanding that should enable them to:

- describe the natural and social scientific concepts and principles within sustainability studies
- identify relationships among human cultures and natural resource use and management
- discuss the different and divergent cultural and disciplinary perspectives of sustainability
- analyze the impacts of lifestyle choices on the environment and resource use (e.g., through life-cycle analyses)
- apply philosophical perspectives, socio-environmental knowledge and practical skills toward the goal of achieving more sustainable lifestyles and social-ecological systems
- discuss key challenges to achieving sustainability at local, regional and global scales

In addition, students should gain:

- understanding & appreciation for the value of quantitative, systems and transdisciplinary thinking
- awareness of global cultures and their value systems
- improved skills for written and oral communication and self-reflective thinking

**Required text:** Wessels, T. 2006. *The Myth of Progress: Toward a Sustainable Future*. Univ. of VT Press; Lebanon, NH.

**Important dates:** Feb. 14: last day to drop the course without receiving a W  
March 28: last day to drop the course and receive a W

## Assignment submission & communications:

Dr. Byrne uses Blackboard for submission of assignments and to provide course materials. Email (.rwu accounts only) is also used regularly to provide course information and communicate important reminders.

## Academic support services

If you are a student with a disability and you wish to receive academic accommodations for any aspect of this course, you must first register with Student Accessibility Services on the second floor of the University Library in the Center for Academic Development. All students wishing to receive accommodations must inform the professor and submit required forms **7 days** ( $\pm$  1 day) in advance of every date for which an accommodation is sought.

### Attendance policy:

Because we form a learning *community* in this course, the presence and participation of each student in each class benefits us all. Thus, attendance is expected (*read: required*) for all class meetings. Excused absences will be granted only for legitimate reasons (severe illness or other extenuating circumstances such as family emergencies) and only when the student informs the professor (by email is OK) in advance of the expected absence (ASAP or at least 12 hours notice for emergencies or illness).

- If you will miss class for legitimate religious observances, you must inform the professor ASAP.
- You will not receive credit for missed in-class work or exams due to unexcused absences.
- **NO MAKE-UP or extra credit** opportunities will be given in place of missed in-class work (incl. exams).
- Students are responsible for turning assignments in on time even if they miss the class period when the assignment is due. Points will be deducted from all assignments turned in late and dates will be established after which assignments will not be accepted and a score of zero will be assigned.

### Academic integrity and classroom civility (including cell phone policy)

By becoming an RWU student, you have agreed to abide by the Academic Integrity pledge (“...to pursue the highest ideals of academic life... to be honest...”) which means that you will not cheat, fabricate information, plagiarize, be fraudulent or interfere with others’ work. The University Statement on Plagiarism in the Undergraduate Catalog reads: “A first offense may result in failure of the course involved, plus an entry on the student’s permanent record. A second offense is punishable by expulsion from the University.” **So don’t plagiarize!** The professor of this course is skilled in identifying plagiarism and will document this or any other instances of academic dishonesty in any student’s permanent file and/or will allow a student to fail the course.

In addition, maintaining academic integrity (e.g., civility) includes respecting others and learning how to disagree with ideas while not being disagreeable. All students should respect their classmates and the learning environment of a classroom; this includes not being disruptive by talking out of turn, texting on mobile devices or using computers for non-class purposes! **Such disruptions are distracting and disrespectful to the professor and other students and will not be tolerated.** Any student who violates these classroom policies will bear the consequences following the definitions, policies and procedures described in the University Catalog. In addition students engaging in such behaviors may be identified by name to the class, or be asked to leave the classroom if they do not conduct themselves civilly or cannot refrain from texting in class. In such instances, the student will receive an unexcused absence with loss of credit for in-class activities.

### Course Components & Grading:

Your grade in this course will be calculated based on the weight for the assignments as follows:

- 20%: In-class & homework assignments (half-sheets, group work, projects, problem sets)
- 20%: In-class quizzes
- 10%: A 3-4 pp. essay response to the readings
- 15%: A 3-4 pp. essay analyzing a real-world sustainability problem & solutions
- 20%: A 6-8 pp. final reflection essay
- 10%: Creative project & essay
- 5%: Required participation in Final Discussion about final paper

### Grading scale and the meaning of grades:

A= ≥ 93% Excellent	A- = 90-92.9% Great	B+ = 87-89.9% Very Good	B = 83-86.9% Good	B- = 80-82.9% Good
C+ = 77-79.9% Average	C = 73-76.9% Average	C- = 70-72.9% Average	D = 60-69.9% Poor	F = ≤ 59.9% Failure

### Suggestions for improving your success in this (and all) classes:

- Actually do the readings! This will help increase your success as a student and citizen.
- Spend ≥ 2 hrs per class period outside of class (≥ 6 hrs per week) reading, studying and working on projects.
- Maintain a list of vocabulary words and their definitions; learning words and how to use them correctly is essential to becoming a successful and respected person/scientist/student!
- Write down questions and muddy-points in your notes and ASK about them discuss in class.
- After each class, write down a summary of the material discussed to reinforce your learning.
- Study for quizzes and exams by reviewing the lesson outcomes study sheets
- Work with classmates to improve your learning! Study together, edit each others’ papers, etc.
- **Remember: Ultimately you are responsible for your own learning! No one else but you can rewire the neurons in your brain to generate personal understanding and knowledge.**

**SUST 101 Course Schedule:**

TBD = Readings/Assignments to be determined

<b>DATE</b>	<b>TOPIC</b>	<b>READING/ASSIGNMENT</b>
<b>Part 1: Introducing Sustainability Studies – A Summary of the Basics</b>		
W 1/26	Course Introduction & expectations	
F 1/28	Exploring Worldviews & Epistemologies	“This I Believe” website
M 1/31	The United States’ Socioeconomic Paradigm	Wessels: Prologue & Introduction
W 2/2	The Larger Context: What is Unsustainable?	
F 2/4	What is Sustainability? Defining the Terms	MEA synthesis report
<b>Part 2: The Science of Sustainability for More Informed Decision Making</b>		
M 2/7	<b>Quiz</b> /Scientific Thinking	N. Angier: from “The Canon”
W 2/9	The value of data & quantitative analyses ( <i>toilet</i> )	<b>“This I Believe” essay due</b>
F 2/11	Complexity vs. Linearity & Life Cycle Analyses	Wessels: Ch 1
M 2/14	Systems Thinking	F. Capra: “Web of Life”
W 2/16	<b>Quiz</b> /What is Life?	F. Capra: “Hidden Connections”
F 2/18	Ecological Limits	Wessels: Ch 2
M 2/21	<i>No class</i> President’s Day	
W 2/23	Populations & Abiota	
F 2/25	Foodwebs & Ecosystem Dynamics	Capra: “Ecological literacy”
M 2/28	<b>Quiz</b> /Energy, electricity & $E=mc^2$	
W 3/2	1 <sup>st</sup> & 2 <sup>nd</sup> Laws of Thermodynamics	Wessels: Ch 3, pp. 40-52
F 3/4	Global Resource Limits & Energy Production & Use	<b>Paper 1 due</b>
M 3/7	The Science of Global Climate Change	
<b>Part 3: Sociocultural Contexts</b>		
W 3/9	<b>Quiz</b> /The Politics of Global Climate Change	Wessels: Ch 3, pp. 52-62
F 3/11	Societal Collapse throughout History	E. Moran: “The Great Forgetting”
☺☺ <i>Spring break</i> ☺☺		
M 3/21	Markets & Economies	Wessels: Ch 4 & “GDP R.I.P.”
W 3/23	Industrialization, Globalization & “Stuff”	
F 3/25	Marketing, Consumerism & The Media	TBD
M 3/28	Challenges to Democracy: Corporate Power & Corruption	Speth: “The Market”
W 3/30	<b>Quiz</b> /The Resource Curse & Global Tensions	TBD
F 4/1	Nature <i>vs.</i> Culture or Nature <i>and</i> Culture?	Indigenous Peoples readings
M 4/4	The Creative Spirit: Human/Nature Connections in the Arts	
<b>Part 4: Working Toward Solutions</b>		
W 4/6	Discussion: Prioritizing Problems, Defining Progress	D. Orr: “What is Education For?”
F 4/8	Cultural Change: Personal vs. Public Choices	Wessels: Ch 5 & Epilogue
M 4/11	Green business, CSR & the triple bottom line	TBD
W 4/13	Culture wars: Civil discourse in a polarized society	TBD
F 4/15	Sustainable eating: healthy bodies, healthy ecosystems	TBD
M 4/18	Sustainable food production (aquaculture)	TBD
W 4/20	Conserving biodiversity & ecosystems	“Selling out on Nature” <b>Paper 2 due</b>
F 4/22	<i>No class</i> Happy Earth Day!	
M 4/25	Environmental policies, politics & citizenship	TBD
W 4/27	Preserving the past in sustainable communities	TBD
F 4/29	Green design & planning	TBD
M 5/2	The Great Energy Debate: Possibilities & Limits	TBD
W 5/4	Environmental Ethics & Justice	Environmental Justice Packet
F 5/6	The Spirits & Souls of Nature: Greening Religion	Gardner, “Invoking the Spirit”
M 5/9	The Creative Spirit Revisited: Personal expressions	<b>Creative Assignment Due in class</b>
W 5/11	Synthesis: Toward Sustainable Lifestyles & Societies	TBD

Final Exam Period: Required Final Exam Discussion; **Final paper due**

**\*\*The professor reserves the right to modify this schedule at any time as necessary\*\***

## Assignment and assessment details (Part 1):

- A. Home- and in-class work** (e.g., quizzes, group activities, all half-sheet assignments; 45% of final grade) will assess students' recall and understanding of concepts and vocabulary from readings and class presentations and discussion (levels 1-2 of Bloom's taxonomy, on Blackboard) as well as develop higher-level critical thinking skills (Bloom's levels 3-6) including application of concepts to problems and self-reflection.
- **Assessment criteria** (*point values vary by assignment; no points given due to unexcused absences*)
    - Recall and comprehension questions: Correct answers will receive full credit and blank or incorrect answers or "I don't know" will receive no credit.
    - Short-answer questions (application, interpretation or opinion-based) will be evaluated on evidence of higher-level critical thinking (refer to Bloom's table on blackboard for key words that provide evidence). Answers with clear evidence of synthetic, analytical or self-reflective thinking will receive full credit. If limited evidence of such thinking is indicated, partial credit will be given. Answers providing no evidence of critical thinking or that lack relevance to readings will receive no credit.
    - For group activities, all group members will receive the same score based on a group product. Groups completing the activity and providing a fully satisfactory written response providing evidence of critical engagement with the topic will receive full credit. Groups completing most of the activity and/or providing a less than satisfactory written response or product will receive partial credit. Groups failing to complete the activity or exhibiting behaviors that suggest a low level of engagement with the topic and providing an unsatisfactory written response will receive no credit.
- B.** Details for other assignments will be provided in a timely manner.