

**COURSE NAME; NUMBER; SEMESTER; MEETING DAYS, TIMES, AND PLACE.**

Introduction to Sustainability  
11:374:299 Fall  
Friday 9:15 am – 12:15 pm  
Location: Foran 191B

**CONTACT INFORMATION:**

Instructor(s): Jill Lipoti  
Office Location: Cook Office Building, 55 Dudley Road  
Phone: 848-932-9120 Email: [jill.lipoti@rutgers.edu](mailto:jill.lipoti@rutgers.edu)  
Office Hours: After class or by appointment

**COURSE WEBSITE, RESOURCES AND MATERIALS:**

- Sakai will be used for course material.
- Textbook (Free, Open Source): Tom Theis and Jonathan Tomkin, Editors, Sustainability: A Comprehensive Foundation. OpenStax CNX. Mar 18, 2014
- <https://open.umn.edu/opentextbooks/BookDetail.aspx?bookId=96>

**COURSE DESCRIPTION:** You see the word Sustainability attached to so many things, but what does it really mean? Are bamboo socks really important? Will electric cars save the world from climate change? What makes development sustainable? How do you measure success in sustainability? Given the long term risk of climate change, what management actions provide the most benefit and why aren't we already doing them?

In this class, you will learn:

- Perspectives on sustainability: environmental, economic and social
- Metrics for measuring components of sustainability

In this class, you will consider:

- Sustainability actions at the local, state, country, and global scales

**LEARNING GOALS:**

- 1) Integrate the meaning of sustainability in your life and your values
- 2) Evaluate perspectives on sustainability regarding environmental, economic and social considerations
- 3) Use metrics for measuring components of sustainability
- 4) Define sustainability within various economic sectors
- 5) Explain sustainability actions at the local, state, country, and global scales

**ASSIGNMENTS/RESPONSIBILITIES & ASSESSMENT:**

- 50% based on written assignments
- 15% based on a midterm
- 20 % in class participation, student presentations, forum participation
- 15% final exam

Learning goals will be assessed as follows:

- 1) Integrate the meaning of sustainability in your life and your values (student presentations)
- 2) Evaluate perspectives on sustainability regarding environmental, economic and social considerations (midterm and final, written assignments)
- 3) Use metrics for measuring components of sustainability (written assignments)

- 4) Define sustainability within various economic sectors (written assignments and presentations)
- 5) Explain sustainability actions at the local, state, country, and global scales (presentations, assignments, midterm and final)

### ACCOMODATIONS FOR STUDENTS WITH DISABILITIES

Please follow the procedures outlined at <https://ods.rutgers.edu/students/registration-form>. Full policies and procedures are at <https://ods.rutgers.edu/>

### ABSENCE POLICY

Students are expected to attend all classes; if you expect to miss one or two classes, please use the University absence reporting website <https://sims.rutgers.edu/ssra/> to indicate the date and reason for your absence. An email is automatically sent to me.

### COURSE SCHEDULE:

Week	Topic	Activities
1	Definitions of Sustainability, Brundtland, Population, Affluence, Technology (IPAT equation) Evolution of Environmental Policy in the US Conservation Movement Environmental Risk Management, Sustainability paradigm	Assignment: (5 points) Watch “Doughnut Economics” on youtube. Write 3 paragraphs on how you would influence the highest resource users to change their consumption choices. Be prepared to discuss your ideas in class.
2	Discussion of Doughnut Economics Public health and climate change Unintended consequences (Malaria, acid rain, stratospheric ozone depletion, coastal hypoxia) Introduction of the UN Sustainable Development Goals	Assignment: (10 points) Look back through history and choose one society. Did it survive so far? What practices were sustainable? What perturbations occurred to cause those societies to change/ collapse? (Use 3 sources and write 2 pages).
3	Student Presentations on sustainable societies Water cycle, water and wastewater treatment, stormwater management UN SDG on Clean Water UNSDG on Life Below Water Solid waste – recycling – litter – plastics in the ocean Ocean acidification and eutrophication Combined Sewer Overflow	Assignment: (5 points) Choose one city with CSO issues, and read their plan. New York, Philadelphia, Camden, Indianapolis, Seattle How does the plan measure success? How does it measure progress? Do you think it will work? Why or why not? Three paragraphs. Be prepared to discuss your findings.
4	Discussion on CSO and stormwater plans Estuaries/ Restoration of wetlands Restoration of Barnegat Bay – 10 point plan Restoration of Raritan River watershed Water Reuse	Case studies of water reuse, Cape May, Tampa, Tel Aviv Assignment: (10 points) Could water reuse be a solution for coastal areas of NJ that are projected to have a high population growth? Strategize about how to build support for water reuse.

5	<p>Water reuse discussion Worldwide energy consumption, energy mix, management of waste generation, tradeoffs in air pollution, CO2 generation UN SDG on Affordable Clean Energy Agriculture Implications of animal and plant extinction</p>	<p>Choose either “old growth forest protection” or “cats as invasive species” or “bringing back the black bear in Florida”. Discuss the importance of individual and non-profit group action versus governmental intervention in preserving and enhancing ecosystems for future generations. How do you see yourself influencing this?</p>
6	<p>Class discussion on intervention strategies UNSDG on Peace and Justice Agriculture and sustainability UN SDG on Zero Hunger Food Waste</p>	<p>Study for midterm</p>
7	<p>Mid-term Learn about the stock market Sustainability Indices</p>	<p>Assignment: Pick a company in the Dow Jones Sustainability Index, and one competitor. Compare and contrast their performance. Provide comments on the reasons for their relative success.</p>
8	<p>Discussion of DJSI Environmental Systems Thinking Life Cycle Analysis Climate Change</p>	<p>Assignment: Identify actions to combat climate change.</p>
9	<p>Field trip to the EcoComplex, Bordentown, NJ</p>	<p>Answer questions related to the field trip on Sakai</p>
10	<p>Cumulative impacts, synergism, diverse populations Risk prioritization schemes – probabilistic risk, scientific uncertainty. Of all the risks affecting a population, which are the most serious? Which are we capable of controlling? How do we accommodate competing goals?</p>	<p>Assignment: Watch youtube of Paul and Ann Ehrlich discuss “Can a collapse of global civilization be avoided?” Comment.</p>
11	<p>Discussion of programs to influence population growth UN SDG on Quality Education and Gender Equality Government systems vs. voluntary actions, Citizen empowerment through information, Pollution Prevention, Right to Know, Toxic Catastrophe Prevention, Mass Balance accounting,</p>	<p>Assignment: Changing the culture How can art/ music/ dance influence the culture to become more sustainable?</p>
12	<p>All students present art/ music/ culture findings</p>	
13	<p>Redevelopment, shifting land uses, trends in residential choices, trends in commuting, Brownfields</p>	<p>Assignment: present a case study, Success story in Brownfields</p>
14	<p>Report out on Redevelopment, Discussion of sustainability jobs, prep for final exam</p>	

Final exam
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## **FINAL EXAM ADMINISTERED DURING EXAM PERIOD**

### **ACADEMIC INTEGRITY**

The university's policy on Academic Integrity is available at <http://academicintegrity.rutgers.edu/academic-integrity-policy>. The principles of academic integrity require that a student:

- properly acknowledge and cite all use of the ideas, results, or words of others.
- properly acknowledge all contributors to a given piece of work.
- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of impermissible materials or impermissible collaboration.
- obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions.
- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress.
- uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Adherence to these principles is necessary in order to ensure that

- everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments.
- all student work is fairly evaluated and no student has an inappropriate advantage over others.
- the academic and ethical development of all students is fostered.
- the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

Enter optional text or delete. Copy and paste elsewhere if you wish to edit. Here is an example from a syllabus (spring 2010 Andy Egan 01:730: 252 Eating Right: Cheating on tests or plagiarizing materials in your papers deprives you of the educational benefits of preparing these materials appropriately. It is personally dishonest to cheat on a test or to hand in a paper based on unacknowledged words or ideas that someone else originated. It is also unfair, since it gives you an undeserved advantage over your fellow students who are graded on the basis of their own work. In this class we will take cheating very seriously. All suspected cases of cheating and plagiarism will be automatically referred to the Office of Judicial Affairs, and we will recommend penalties appropriate to the gravity of the infraction. To help protect you, and future students, from plagiarism, we require all papers to be submitted through Turnitin.com.

### **STUDENT WELLNESS SERVICES**

Just In Case Web App <http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901/ [www.rhscaps.rutgers.edu/](http://www.rhscaps.rutgers.edu/)

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy,

group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

**Violence Prevention & Victim Assistance (VPVA)**

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / [www.vpva.rutgers.edu/](http://www.vpva.rutgers.edu/)

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

**Disability Services**

(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

**Scarlet Listeners**

(732) 247-5555 / <http://www.scarletlisteners.com/>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.