

Sustainability: Tackling Food Waste

11:020:337 3 Credits

Fall 2017

(last updated 5/19/2017)

3 Credit Lecture Class (class size limited to 25 students)

Wednesday 9:15 am – 12:15 pm

Location: Foran 138B

CONTACT INFORMATION:

Instructor(s): Jill Lipoti

Office Location: Cook Office Building, 55 Dudley Road

Phone: 848-932-9120 Email: jill.lipoti@rutgers.edu

Office Hours: After class or by appointment

and

Instructor(s): Xenia Morin

Office Location: NJ Institute for Food, Nutrition and Health, Suite 220

Phone: (848) 932-3502 Email: xenia.morin@rutgers.edu

Office Hours: After class or by appointment.

PREREQUISITES: 11:020:210 Introduction to Agriculture and Food Systems or 11:374:299 Introduction to Sustainability or 11:374:298 Sustainable Food: Policy, Politics and Ethics; or by special permission of the instructor.

COURSE WEBSITE, RESOURCES AND MATERIALS:

- Sakai will be used for course material. An Affordable textbook library grant has been awarded for this class and will be used to create the material for the class.

COURSE DESCRIPTION:

It is estimated that over 40% of the food purchased goes to waste which makes our food system significantly unsustainable. The United States Department of Agriculture (USDA) and Environmental Protection Agency (EPA) have a goal to reduce the nation's food waste by 50% by the year 2030. Reducing wasted food will save resources (e.g. water, gasoline, energy, labor, land, and fertilizer), reduce methane from landfills, and return nutrients to the soil. Instead of feeding landfills, we can feed people. This class will use the food recovery hierarchy and the circular economy as frameworks to discuss actions which can be taken by individuals, institutions, and businesses. Students will develop analytical skills and experience to help them be part of the solution to the food waste problem. Students will learn about sustainability and food waste through case studies, and will consider various opportunities, methods and scales of action that can contribute to food waste reduction. One or more field trips will be part of the class.

COURSE LEARNING GOALS:

- 1) Knowledge of the food recovery hierarchy
- 2) Identification of areas where food waste could be minimized
- 3) Understanding policies related to food waste, e.g. expiration dates
- 4) Investigating food waste on the Rutgers campus with options for minimization

- 5) Exploration of methodologies to collect food waste metrics
- 6) Exploration of models for food waste minimization at the individual and institutional levels

ASSIGNMENTS/RESPONSIBILITIES & ASSESSMENT:

- 35% based on short projects (e.g. personal food waste inventory, cafeteria food waste observations, expiration date survey and policy options)
- 20% based on a midterm
- 25 % in class participation, student presentations, forum participation
- 20% final project (for example: on composting – data collection, assessment, opportunity for scale-up)

Learning goals will be assessed as follows:

- 1) Knowledge of food recovery hierarchy (mid-term questions)
- 2) Identification of areas where food waste could be minimized (mid-term question and forum)
- 3) Understanding policies related to food waste, e.g. expiration dates (short project, forum)
- 4) Investigating food waste on the Rutgers campus with options for minimization (short project and forum)
- 5) Exploration of methodologies to collect food waste metrics (in class discussion, forum)
- 6) Exploration of models for food waste minimization at the individual and institutional levels (final project)

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 (tentative, as of February 2017):

Week	Topic	Activities (may be revised)
1	Introductions; Food Recovery Hierarchy; Circular Economy, Where does Sustainability fit in? Food’s energy and water footprint.	Forum discussion of circular economy
2	Exploring the Food Waste Hierarchy: Part 1. Source Reduction, Waste audit, Individual Waste assessment tools	Short project #1: Food Waste Diary
3	Student Presentations on food waste NJ Food Waste – where does it go now? Biomass Energy Potential in NJ Starting the composting	Final Project: Start composting project
4	Regulatory actions impacting food waste Voluntary actions including Sustainable Jersey	Forum discussion of Biomass potential, regulatory actions, and voluntary actions

	Case studies	
5	Exploring the Food Recovery Hierarchy, part 2, Industrial uses. Lessons from failed programs: environmental hazards from composting and rendering. Siloxane production from biogas. Lessons from successful programs: Seattle/ NYC food waste programs	Forum discussion of Seattle and NYC's food waste programs
6	Regulations: The role of food expiration dates Case Studies	Short project #2: Expiration dates of food pantry items.
7	In class Mid-term and discussion	
8	Rutgers as living campus: Field trip to Rutgers Dining, Food Recovery Hierarchy: Feed Animals. Guest Speaker: Joe Charette	Composting project data collection
9	Middlesex County Field Trip: Utilities Authority to see where the waste water from compost goes; landfill and biosolids.	Forum discussion of nutrient loss when waste is sent to sewage treatment and sludge is applied as landfill cover; resources needed for fertilizer production
10	Going Global: Sustainability Goals Ecological footprint of food; Metrics for measurement	Composting project data collection
11	Ethical considerations: supply chain, fair trade, local, organic, labeling, Packaging – reusable, recyclable Group work on composting project	Forum discussion of carbon footprint for transporting food internationally, what are the externalities?
12	Food Processing and packaging techniques and extension of shelf life Guest lecture: Food Science faculty (TDB) Data analysis techniques	Forum discussion of UN World Food Programme, Future Food- 2050
13	Food Recovery Hierarchy: feed people, food donation, food pantries, Emerson Act, gleaning, Grow a Row, Blue Apron	
14	Final Project Presentations	
	Final paper due	

FINAL EXAM/PAPER DATE AND TIME

Paper in lieu of final exam.

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.

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/

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/

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.