WSTE 485/685: Solid Waste Management II
SPRING 2024

Instructor: Dr. Robert Michitsch

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Office Hours: By appointment

Class/Lecture   Tuesday 5:00 PM - 7:50 PM in TNR 255 or WEC 110

LEARNING OBJECTIVES

1. Students will develop a more advanced understanding of the generation, treatment, and management of municipal, commercial and high-volume industrial waste materials.
2. Students will critically evaluate integrated waste management and resource recovery processes and policies in Wisconsin and compare them with practices used elsewhere.
3. Students will expand their written and oral presentation skills necessary to effectively convey technical, economic or social information related to integrated waste management and resource recovery.
4. Students will gain skills and knowledge for a professional entry-level position in the solid waste resource management field.
5. Students will understand that there are frequently more questions than answers in the dynamic and competitive world of integrated waste management and resource recovery.

CHEATING / PLAGIARISM

Cheating and plagiarism will not be tolerated. Students may work together on group assignments or projects, but each student will complete individual assignments (i.e. paper and/or presentations) and exams independently unless otherwise advised. Each student must present their own interpretation of analyses and reflect their own understanding of assigned problems or assignments.

HOMEWORK

Homework assignments <u>may</u> be given periodically throughout the semester. These assignments are generally due one week later, depending on the complexity of the problem.

GRADUATE STUDENT ASSIGNMENTS

A separate assignment will be completed and presented to the class.

TEXTS

No standardized text. Some research materials will be found in the library. Various reference materials will be provided throughout the semester.

GRADING
Participation/Assignments (5%); Exam 1 (10%); Exam 2 (15%); Project/Presentation (70%)

Grading Scale: Grades will be given according to the grading scale developed by Dr. Michitsch.

EXAMS
Exam 1 and Exam 2 will consist of multiple choice and/or short answer and/or essay type questions that reflect the materials covered during lecture, provided by guest speakers and covered during any field trips. There may also be computational problems on each exam, which will be more closely related to the homework assignments or indicated topics. It should be noted that Exam 2 <u>will be</u> cumulative. The nature and scope of the final exam will be determined at the end of the semester, and may include of a written review/critique of projects/presentations.

<u>TENTATIVE</u> COURSE OUTLINE

<u>Week:</u>	<u>Topic(s)</u>
1	Syllabus review, Project introductions
2	Project work time
3	World Waste
4	Project Proposal (maximum 2-3 pages) due by Tuesday February 16th by 5:00pm
	Medical Wastes/Sharps/Mercury
8/10	EXAM 1
9	Spring Break
11-15	Anaerobic Digestion and field trip
14	Earth Week activities maybe
16	Project Presentations / Review for Exam
17	EXAM 2 Thursday May 16th at 7:15pm

Other weeks and topics TBD:

Mixed Waste Management	Phytoremediation/Integrated Resource Management
Biohazard Wastes	Gasification / Pyrolysis / Alkaline Hydrolysis
Landfill Organic Stability	Local Officials / Host Community Issues
Special Waste	Landfill Biogas Engineering
Gas Systems Engineering	Air Pollution &Permitting, Combustion
Life Cycle Analysis	"Outside of The Box" Waste Management
Solid Waste Consulting	Private Waste Management
Other field trip(s)	

WSTE 485 PROJECTS

Students will be assigned to small groups to work together as a Project Team/Consulting Firm on designated projects. Preliminary arrangements with existing, real-world businesses or organizations with a current and specific solid waste or resource management need have been made. Students groups will be paired with one of these organizations or businesses and will be accountable to them for an end product to meet the need of the entity.

Project Status Reports

What: Each project team will develop a brief (maximum 1 page) summary of activities completed by the Team over the past week and/or status of activities initiated in prior weeks.

When: Due at 12:00 noon each Tuesday (beginning February 2nd) unless instructed otherwise.

How: Each Team's Project Leader will send one email to the following contacts with the *Status Report* attached:
Your Project's "Customer" contact(s)
Rob Michitsch (rmichits@uwsp.edu)
All members of your group

NOTE: While the Project Leader will send the email, this does not imply that the Project Leader is solely responsible for creating the Status Report. Status Reports should be developed as a Team effort.

Content / Format:
Create as a Microsoft Word document. Use complete sentences, in organized paragraphs and check for proper grammar and spelling. (NOTE: These reports will provide helpful documentation of your activities, which may be useful for writing your final reports.)

Include the following as relevant for the reporting week, plus any other information or comments you wish to share:
1. Project Title, Team Name, Date of Report
2. Tasks completed and/or the status of tasks (i.e. emails sent, calls made, etc.)
    - identify which students/Team members were involved for each task.
3. Details for any meetings that occurred (i.e. Project Team meetings, meetings with project Customer, potential stakeholders, etc. Identify the following:
    - when and where the meeting took place
    - who was present
    - purpose of meeting / what was discussed
4. Attach any draft documents for review and comments (when appropriate)
5. Identify planned activities for the upcoming week
6. List any questions or concerns your group may have related to the Project so that faculty and/or customer may help address the situation.

Project Grade Breakdown

Project Proposal - 5%   Project Status Reports - 10%   Final Tangible(s) - 10%
Final Project Presentation - 10%   Customer Evaluation - 15%   Peer and Faculty Evaluation - 20%