ENVE 4920W Environmental Engineering Projects II
Spring 2020 Syllabus

Instructor: Dr. Timothy Vadas, timothy.vadas@uconn.edu, 860-486-5552
Class meets: TTh 2:00-3:30 PM, Castleman 201/212 (See attached schedule)

Course meetings moved online after 3/23/20

Course Description:
Students working individually or in groups produce a solution to environmental engineering design projects from data acquisition through preliminary design, cost estimating and final specifications, oral presentation and written reports.

Course Purpose:
This course is meant to transition you from an engineering student to a practicing engineer. You have spent the last few years learning bits and pieces of what it takes to be an environmental engineer. This course ties together much of that knowledge while applying it to a present day problem. The problems are open-ended and the course experience is more about the process than the outcome. You will define your problem, identify and analyze any relevant information, develop a model, evaluate alternative solutions, and design an appropriate solution to meet client, site, regulatory, and economic constraints. You will struggle with finding the appropriate information, working with team members, applying your skills to an actual site with various issues (simplifying assumptions not always applicable), and communicating with advisors, clients, and stakeholders. This is all realistic. Throughout the project you will improve your ability to discern information, address working in team issues, communicate informally and formally, and manage your time. I welcome any discussion on these issues.

Communicating, both orally and in writing, is a large part of any future job. You will improve your writing and presentation skills through in class discussion and writing review, advisor and instructor comments, peer review and self-assessment. You should end up with a product you are proud of and is useful for your client.

Course Outcomes:
This course contributes to students' ability to:

- Communicate in writing and orally effectively to different audiences
- Work effectively in teams on demanding projects
- Design a system, component or process given multiple constraints
- Address relevant regulations in the design process
- Estimate cost of design implementations
- Synthesize skill sets learned in other courses
- Gain knowledge of contemporary issues in environmental engineering

Course Writing Components:
The senior design courses (ENVE 4910W & 4920W) carry a "W" designation, and thus include an intensive writing component, including instruction, feedback and revision. All writing is double-space, 1" margins, Times New Roman size 12 font. The writing assignments for

4920W consist of:

- Abstract. 1 page.
- Poster presentation. 1 page.
- Thank you letter. 1 page.
- Weekly Progress Reports. 2 pages.
- Final design report. 10 pages minimum per student.

Writing feedback will be provided by the instructor, your peers and your project advisors in order to revise and improve your writing. Due dates for assignments are indicated on the schedule below.

Each student must pass the writing component in order to pass the course.

Grading:

Course Component	% Grade
Senior Design Day Abstract and Poster	5
Thank You Letters	5
Weekly Progress Reports	15
Final Oral Presentation*	10
Final Written Report*	65

* Individual grades within a group can vary

Textbook:

Robert Irish. 2015. Writing in engineering: A brief guide. Oxford University Press, New York, NY.

I have three copies of this I can loan for 3 days at a time.

Assignments:
More detail and due dates are provided in each assignment handout, and/or on the schedule below

Senior Design Day Abstract and Poster:
Each senior design team will prepare a poster to display at Senior Design Day in Gampel Pavilion on the last day of class. Each team will also prepare a half-page project abstract for the senior design day book that is distributed to visitors. The description will be due as indicated on the general course syllabus. The draft poster is due on the day indicated on the syllabus.

Thank You Letters:
Each student will write a letter to the project sponsor thanking for their time working with them on the project. This letter should be done in a standard business letter format.

Weekly Progress Reports:
Each team member must submit a weekly status report in the google drive (even on weeks when we do not meet in person). Your report must include the following:

1. Name, Project team number, date

2. Progress schedule graph showing status of each project task, e.g., a GANTT chart with an indication of progress
3. Progress made in the past week (by yourself, including how it relates to the rest of your team)
4. Challenges that have arisen, potential implications for the project, and proposed solutions
5. Plans for next week
6. Plans for beyond next week

Final Oral Presentation:
You will arrange to have a presentation to your sponsor and/or town or company (and me if possible) at some point in the last 2-3 weeks of class. This could also be something more unique, such as a planning and zoning commission, or to a review committee at DEEP. For example, a past Mansfield Community Center project presented to the Town of Mansfield Sustainability committee in the past. All this should be discussed with your advisor and sponsor early in order to plan.

Final Written Report:
The final report for the second semester of senior design will be in the form of an engineer's report. This should provide a summary of your project task, analysis, design and justification. This assignment should be at least 5 pages per group member, single spacing, 1" margins, Times New Roman font size 12. Report lengths are often between 30-60 pages all-inclusive.

Seminars:
There will also be a few seminars scheduled through the semester on topics that may help with completing your projects, such as cost estimating and project management. These will be announced as they are confirmed and will occur during regular class time.

ENVE 4920W Schedule

Date	Time	Location	Assignment Due	Topics
Jan 21	2:00 PM	CAST201		Syllabus, assignments
Jan 23	2:00 PM	CAST308		Group meetings
Jan 28/30	2:00 PM	CAST201		Group meetings
Feb 4/6	2:00 PM	CAST201		Group meetings
Feb 11	2:00 PM	CAST201	**Draft of Project Report 5&6 due**	
Feb 18	2:00 PM	CAST308	Writing workshops (2-3 groups)	
Feb 20	2:00 PM	CAST308	Writing workshops (2-3 groups)	
Feb 25	2:00 PM	CAST201	Senior design day abstract due	Giving Presentations
Feb 27	2:00 PM	CAST308	Writing workshops (2-3 groups)	
Mar 3	2:00 PM	CAST201	Draft Design presentations (2)	Class feedback on presentations
Mar 5	2:00 PM	TBD	Draft Design presentations (1)	Class feedback on presentations
Mar 10	2:00 PM	CAST201	Draft Design presentations (2)	Class feedback on presentations
Mar 12	2:00 PM	TBD	Draft Design presentations (1)	Class feedback on presentations
Mar 24	2:00 PM	online		Seminar on cost estimation (tentative); Vadas out of town
Mar 26	2:00 PM	online		Group meetings
Mar 31	2:00 PM	online		Group meetings
Apr 2	2:00 PM	online		Group meetings
Apr 7	2:00 PM	online		Formatting professional documents/visuals
Apr 14	2:00 PM	online	Presentations (2)	Class feedback on presentations
Apr 16	2:00 PM	online	Presentations (1)	Class feedback on presentations
Apr 21	2:00 PM	online	Presentations (2)	Class feedback on presentations
Apr 23	2:00 PM	online	Presentations (1) **Poster due**	Class feedback on presentations
Apr 28	2:00 PM	online	**Final report due**	**Thank you letters due**
May 1	1:00 PM	TBD		Senior Design Day

Feel free to make a separate appointment as a group or individual for help on project or writing work.