

ENVE330 - Environmental Engineering Design

University: Green Valley University

Course Duration: Full Year (Fall and Winter)

Instructor: Dr. Linda Martinez

Contact Information: linda.martinez@gvu.edu

Office Hours: Mondays and Wednesdays, 2:00 PM - 4:00 PM

Course Description

This third-year course involves designing solutions to environmental engineering problems, such as waste management systems, water treatment plants, or air pollution control devices. The course emphasizes sustainable design practices, regulatory compliance, and community engagement.

Learning Outcomes

By the end of this course, students will be able to:

- 1. Conduct environmental impact assessments for engineering projects.
- 2. Apply sustainable design principles to environmental engineering challenges.
- 3. Develop detailed designs for environmental systems.
- 4. Ensure regulatory compliance and standards are met in their designs.
- 5. Engage with community stakeholders and incorporate their feedback.
- 6. Communicate design concepts and results through written reports and oral presentations.

Course Timeline and Deliverables

Fall Semester:

Date	Deliverable	Description	Weight
September 15, 2020	Team Formation and Project Proposal	Teams form and submit a proposal outlining the project scope and objectives.	10%
October 20, 2020	Environmental Impact Assessment Report	Detailed assessment of the environmental impacts of the proposed project.	15%
November 25, 2020	Preliminary Design Review	Presentation of initial design, including sustainability and regulatory considerations.	15%
December 10, 2020	Midterm Progress Report	Report on progress, challenges, and next steps.	10%

Winter Semester:

Date	Deliverable	Description	Weight
February 15, 2021	Detailed Design Document	Comprehensive design document with detailed drawings and specifications.	15%
March 20, 2021	Prototype Development and Testing Report	Report on prototype development and testing results.	20%
April 10, 2021	Final Presentation and Demonstration	Final presentation and demonstration of the environmental engineering project.	15%

Grading Breakdown

- Team Formation and Project Proposal: 10%
- Environmental Impact Assessment Report: 15%
- Preliminary Design Review: 15%
- Midterm Progress Report: 10%
- Detailed Design Document: 15%
- Prototype Development and Testing Report: 20%
- Final Presentation and Demonstration: 15%

Total: 100%

Course Policies

- **Attendance:** Regular attendance is required. More than three unexcused absences may result in a lower grade.
 - **Late Submissions:** Assignments submitted late will incur a penalty of 5% per day, up to a maximum of 25%.
 - **Academic Integrity:** All students are expected to adhere to the university's academic integrity policy. Plagiarism or cheating will result in disciplinary action.
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Required Materials

- Textbook: "Introduction to Environmental Engineering" by Mackenzie L. Davis and David A. Cornwell
 - Access to environmental modeling software (e.g., EPANET, SWMM)
 - Prototyping materials (to be specified based on project requirements)
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Additional Resources

- University Library
 - Environmental Engineering Lab
 - Online tutorials and workshops
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This syllabus provides a comprehensive overview of the ENVE330 course, including key elements such as learning outcomes, a detailed timeline with deliverables, and their respective weights. If you need any further details or adjustments, feel free to ask!