

# CE 498 – Senior Design – Spring 2009

Harvill 115, 5:00 - 6:15 PM - M,T,Th

## Instructor:

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## Graduate Assistant

## Office Hours:

Mondays 5:00 – 6:15  
Tuesday 5:00 – 6:15  
Thursday 5:00 – 6:15  
and by appointment

## Learning Objectives:

It is the objective of this course to provide to the student experience with:

- Meeting deadlines
- Providing designs and design concepts that have good practical, aesthetic, and fiscal value;
- Working within a group
- Professional writing and presentations

## Prerequisites

CE 301, CE 408 and at least 4 of the following courses:

CE 323, CE 334 or CE 335, CE 343, CE 363, CE 370R and CE 370L

**If you do not have these courses explicitly completed, please see Dr. Lansey.**

## Grading:

**The grading scale will be as follows. However, the instructor reserves the right to lower the scale.**

Course Grade	Percentage
A	100-92
B	91-83
C	82-74
D	73-65
E	<64

Grade Requirements	Weighting
Attendance and time sheets	10%
Normalized Peer Evaluation	10% to 40%
Design Summary Report	45%
Final Presentation	35%
Transportation Eng.	7%
Hydrology/Hydraulics	7%
Geotechnical Eng.	7%
Structural Eng.	7%
Verbal Presentation	7%

## Attendance – 5%:

**CE 498 is not a correspondence course.** Each student is expected to be regular and punctual in class attendance. Any student missing class must notify their Principal of their group and Mr. Mathieu as to the reasons for the missed class. Any student missing class is still responsible for the material covered in that class as well as any group deadlines.

**All students are required to be in class at the designated start time and for the duration of the class.** At the beginning of each class, attendance will be taken by the principal of each firm. All students are required to sign the attendance sheet. Shortly after the beginning of each class (approximately 5:10 PM), each principal shall give their group's attendance sheet to Mr. Mathieu. A dated form letter with signatures would be best. The minimum information recorded for each class period shall be the date and names of individual team members present. In the case where the principal is absent, the responsibility of preparing the attendance sheet and getting the team members to sign it shall pass through the chain of command as determined by the group.

**If a group does not turn in an attendance sheet, all members of the group will be marked absent that day or days.**

**Time Sheets – 5%:**

Each Monday, the principal of each firm will submit a Time Sheet for the previous week's work. Shortly after the beginning of each class, each principal shall submit the time sheet. In a case where the principal is absent, the responsibility shall pass through the chain of command as was determined in CE 408.

A dated time sheet with printed names and a space for signatures is required. Minimum information required for each time sheet shall be the date (the week ending), tasks worked on that week, who worked on the tasks, and the number of hours worked on the tasks by each group member. Each group member shall verify the hours worked each week by initializing the total hours.

**Failure to submit the Time Sheet and follow the specific directions will result in all team members being documented as having not worked any hours that week and no time sheet submitted.**

**Peer Evaluation – 10% to 40%:**

**The Peer Evaluation Grade is intended to be 10% of the total grade in the course, but may vary significantly from this value. In the case where individual members who, in the unanimous view of the other team members, do not contribute "their fair share" to the progress of their specific design elements, the Design Summary Report, and the Final Presentation; the Peer Evaluation Grade will be raised to as much as 40% of the their grade in the class. All other percentages will be lowered uniformly to accommodate this change.**

**The entire team will carry the same score for the Design Summary Report and the Final Presentation. Individual grades amongst the group will be distinguished by attendance, time sheets, and Peer Evaluations.**

**The Peer Evaluations are due at the designated time. If a student fails to turn in the Peer Evaluation at the designated time, his or her Peer Evaluation Grade will be reduced by 10 points. As an example, Student A fails to turn the Peer Evaluation at the designated time and the average of Student A's Peer Evaluation Grade is 93.5, as a result of the late Peer Evaluation, Student A's Peer Evaluation Grade will be reduced by 10 points to 83.5.**

**Design Summary Report – 45%:**

A Design Summary Report shall be prepared that covers all the design concepts investigated and used this semester. The report shall cover in detail the geotechnical design elements, the structural design elements, the hydrology elements, and the transportation elements. The report shall expand upon the research and summaries completed in CE 408. The report is limited to 30 pages plus an Appendix. Required elements/summary of results shall be in the report not the Appendix.

**Final Presentations – 35%:**

**The Final Presentation will be a PowerPoint presentation covering all the elements in the Design Summary Report.** A laptop and a laptop projector will be provided. Teams may not bring in their own laptop or projector. Your presentation should be well rehearsed and stay within the time constraints. Other rules, including the format and order will be provided at least 1 week prior to the Final Presentation.

In the case of the **Final Presentation**, 1 original and 2 copies of the final **Design Summary Report** and a CD covering the **Final Presentation** needs to be submitted.

The final **Design Summary Reports and the Final Presentation CDs** are due on Tuesday, May 5, 2009 before 6:15 PM. The reports and CD will be transmitted to Mr. Mathieu. Once submitted, no changes may be made.

**Attendance at Final Presentations:**

As individual groups present their efforts alone, it has been our observation that much of the learning in this class is lost. Some groups are doing the absolute best that they know how, but still do not pull everything together properly. They simply don't know a better (or different) method. Hence, all students are required to attend at least one or two of the other groups' **Final Presentation**. Attendance will be taken at the **Final Presentations**. So that each group has an opportunity to present in front of an audience, there will be special enticements given to students attending the last two **Final Presentations**. Such enticements will include but not limited to eliminating an unexcused class absence by attending the last two **Final Presentations**.

**Student Code of Ethics:**

Every student should read the code of ethics. Cheating of any kind, including homework, will be taken very seriously. Action will be taken against the offending person(s) according to the "Student Behavior Policy." This action is severe. Bottom line - Don't do it! Having stated this, there is a fine line between working together and cheating. We certainly encourage students to work together, particularly in the area of discussing approaches to solutions. The difference between cheating and working together is the level of interaction and discussion that takes place.

**Dropping/Withdrawal from Classes:**

Last day to add/drop any class using a Change of Schedule form is **Monday January 26, 2009**. Beginning **January 27** and continuing through **February 10, 2009**, students may withdrawal from a course with a complete deletion from their record. Beginning **February 11** and continuing to **March 10, 2009** students may drop the class if they are passing and they have the instructor's permission. A "W" grade will be recorded and applicable tuition and fees will be assessed for each course. Before withdrawing from this course, remember that it will not be taught until next spring. Hence, if you do decide you need to drop, you'll likely affect your graduation date.

**University of Arizona Equal Opportunity Statement:**

The U of A is committed to policies of equal opportunity and affirmative action. It prohibits discrimination on the basis of race, color, national origin, religion, sex, sexual orientation, age, or status as a Vietnam veteran, disabled veteran, or a person with a disability. The University seeks to provide equal access to its programs, services, and activities for people with disabilities. Reasonable prior notice is needed to arrange accommodations. Evidence of Practice not consistent with these policies should be reported to the Office of Equal Opportunity and Affirmative Action, 621-9449.

**Spring Break:**

Spring Break is from **Saturday March 14, 2008 to Sunday March 22, 2009**.

**ASCE Student Conference:**

Due the ASCE Student Conference, class will not be held on Thursday, April 2nd. We will meet on Monday, March 30th and Tuesday, March 31st that week.

**CE 498 – Lecture Schedule**

Typically there will a general lecture on Mondays and group work on Tuesdays and Thursdays. Mondays' lectures are typically held in the Harvill Building Room 115. Group work on Tuesdays and Thursdays will be held in CE 201 or others rooms in the CE Building.

## Tentative Lecture Schedule

<b>Date:</b>	<b>Topic</b>	<b>Speaker:</b>
January 20	Review last semester's report (Group A)	
January 22	Review last semester's report (Group B)	
January 26	Review syllabus and Course Requirements (Harvill 115) ( <b>full class</b> )	
January 27	Group Work (Group A) (CE Bldg.)	
January 29	Group Work (Group B) (CE Bldg.)	
February 2	Group Work – Meetings in CE Bldg. ( <b>full class</b> ) <b>Submit Schedule and Sample Time Sheet</b>	
February 3	Group Work (Group A) (CE Bldg.)	
February 5	Group Work (Group B) (CE Bldg.)	
February 9	Turning Movement Counts and Safety (Harvill 115) ( <b>full class</b> )	
February 10	Group Work (Group A) – Turning movement counts (field)	
February 12	Group Work (Group B) – Turning movement counts (field)	
February 16	Structural Design Elements (Harvill 115) ( <b>full class</b> )	Dave Gibbens
February 17	Group Work (Group A) (CE Bldg.)	
February 19	Group Work (Group B) (CE Bldg.)	
February 23	Geotechnical Design Elements (Harvill 115) ( <b>full class</b> )	Dr. Scott Merry
February 24	Group Work (Group A) (CE Bldg.)	
February 26	Group Work (Group B) (CE Bldg.)	
March 2	Hydrology/Hydraulics Design Elements (Harvill 115) ( <b>1/2 class</b> )	Leo Smith
	HSC Analysis (CE 201) ( <b>1/2 class</b> )	Dr. Hickman
March 3	Group Work (Group A) (CE Bldg.)	
March 5	Group Work (Group B) (CE Bldg.)	
March 9	Structural Design - Q & A Session (Harvill 115) ( <b>full class</b> )	Dave Gibbens
March 10	Group Work (Group A) (CE Bldg.)	
March 12	Group Work (Group B) (CE Bldg.)	
<b>March 14-22</b>	<b>Spring Break</b>	
March 23	Stock Market and Investments (Harvill 115) ( <b>full class</b> )	<b>TBA</b>
March 24	Group Work (Group A) (CE Bldg.)	
March 26	Group Work (Group B) (CE Bldg.)	
March 30	Geotechnical Design - Q & A Session (Harvill 115) ( <b>1/2 class</b> )	Dr. Scott Merry
	HSC Analysis - Q & A Session (CE 201) ( <b>1/2 class</b> )	Dr. Hickman
March 31	Group Work (Groups A and B) (CE Bldg.) ( <b>full class</b> )	
April 2	<b>No class – ASCE Leadership Conference</b>	
April 6	Group Work (CE Bldg.) ( <b>full class</b> )	
April 7	Group Work (Group A) - Hydro Q & A Session (CE Bldg.)	Leo Smith
April 9	Group Work (Group B) - Hydro Q & A Session (CE Bldg.)	Leo Smith
April 13	Group Work ( <b>full class</b> ) <b>Submit preliminary Design Summary Report</b>	
April 14	Group Work (Group A) (CE Bldg.)	
April 16	Group Work (Group B) (CE Bldg.)	
April 20	<b>Return Preliminary Design Summary Report – Q and A (full class) – Final Presentation Info.</b>	
April 21	Group Work (Group A) (CE Bldg.)	
April 23	Group Work (Group B) (CE Bldg.)	
April 27	Group Work ( <b>full class</b> ) (CE Bldg.)	
April 28	Group Work (Group A) (CE Bldg.)	
April 30	Group Work (Group B) (CE Bldg.)	
May 4	Group Work ( <b>full class</b> ) (CE Bldg.)	
May 5	Final Presentation CD and the Design Summary Report are due at the end of class ( <b>full class</b> )	
May 6-8	Final Presentations – Order to be determined	