

**COURSE NAME:** AECT 480 – Reinforced Concrete Design

**CREDIT HOURS:** 3; 2 – 1½ hour lectures per week

**INSTRUCTOR:** D. Hultenius.....**PHONE:** (607)746-4081

**e-mail:** hultendc@delhi.edu **OFFICE HOURS:** See Web Site

**Web Site:** <http://faculty.delhi.edu/hultendc/>

**PREREQUISITE:** AECT 360 – Structural Theory

**COURSE OBJECTIVES:**

1. Know and understand basic principles and practices associated with design, analysis and usage of structural steel and reinforced concrete in buildings and other structures.
2. Be able to effectively use the latest industry standard formulas, tables, design aids and computer software in the economical selection (design) of steel and concrete members.
3. Become familiar with current construction practices and techniques when preparing construction documents.

**TEXT:** Lecture notes – available at Campus bookstore

**GRADING:** Two (2) unit tests.....20% (No test grade dropped)  
Weekly/unannounced quizzes.....20% (**ONE** quiz grade dropped)  
Homework.....25% (**ONE** homework grade dropped)  
Concrete Design Project.....25%  
Comprehensive Final Exam.....10% (“A” average exempt from Final)  
Total = 100%

**POLICIES:**

1. **ATTENDANCE:** All students are expected to attend ALL required lectures and labs, and attendance WILL be taken at each. Quizzes or graded homework (announced or unannounced) missed will be given a grade of zero, no exceptions. A test may, at the discretion of the instructor, be made-up under extreme circumstances only (i.e., medical, death in family, natural disaster or legitimate religious observance). Lateness and/or being unprepared for class will not be tolerated as it is disruptive and inconsiderate. Repeat violators may be withdrawn from the course.
2. **CHEATING:** First time violators will be given a grade of zero for that particular test, quiz or homework for ALL PARTIES INVOLVED. Cheating, or plagiarism, is defined as copying or “sharing” all or partial work from another student (written or electronic) with or without the other student’s knowledge. Repeat violators will be given an “F” for the course and be referred to the Division Dean for further action.
3. **OUTSIDE HELP:** Please make every effort to see me for additional help if, at any time, you feel you need some further clarification or review of the subject matter. Do not let yourself get too far behind, I am here to help you. It is possible that a peer tutor will be available.

## Spring 2009 Tentative Course Outline

<u>Lecture:</u>	<u>Topic:</u>
1	Course info.. concrete properties
2	Intro. to ACI 318-08
3	Flexural members – flexure formula
4	Flexural members – singly-reinforced beams
5	T-beams
6	One-way slabs
7	Two-way slabs
8	<b>TEST 1</b>
9	Shear in beams
10	Shear in beams (cont.)
11	Development of reinforcement, splices, hooks
12	<a href="#">Concrete Design Project (Handout given in class)</a>
13	Serviceability of concrete members
14	Columns – no eccentricity
15	Columns with applied moment
16	Columns with applied moment (cont.)
17	Concrete member analysis/design using RAM software
18	<b>TEST 2</b>
19	Footings – wall
20	Footings – column
21	Walls – bearing walls
22	Walls – cantilevered retaining walls
23	Concrete formwork
24	Prestressed concrete fundamentals
25	Concrete specifications
26	Metric units in concrete design
27	* TBA *