Instructor (First Half)	**Dr. Mahmoud Reda Taha, P. Eng** **Associate Professor & Regents' Lecturer** Centennial Engineering Center: 3037 Tel: 277-1258, e-mail: mrtaha@unm.edu
Lectures	Lectures Three times Weekly: **Tuesday and Thursday 9:30 – 10:45 & Wednesday 2:00 – 3:50** **Centennial Engineering Center 1026**
Textbooks **Lecture Notes**	- ***Textbook: Reinforced Concrete: Mechanics and Design, 6th Edition, James G. MacGregor and James K. Wight, Prentice Hall, 2012*** - ACI Building Code for Structural Concrete (ACI 318-11) - Lecture notes delivered in the class. - Lecture notes will be distributed by the instructor
Office Hours	Tuesday & Thursday 1:00 – 3:00 or by appointment. You can always communicate with me by email.
Expected Outcomes (In accordance with Civil Engineering Departmental Goals)	• This course contributes to the following educational outcomes in the objectives of the CE Department: • A familiarity with the modern tools for engineering analysis, including computers and sophisticated laboratory equipment. • An ability to approach and solve engineering problems in a structured manner. • Synthesis of knowledge from various sources to produce creative, cost-effective designs for civil engineering facilities. • A commitment to become registered as professional engineers. • An ability to communicate effectively, both in written and oral forms, as well as an ability to listen. • A sensitivity to practice personal and professional ethics. • A basic understanding of societal and environmental issues as they affect engineering decisions
Learning Objectives	***After completing this course the student shall be able to*** 1- Explain principles of reinforced concrete mechanics 2- Design of concrete elements under flexural loads including a- Determining the required amount of reinforcement b- Check shear strength of concrete elements c - Check deflection of concrete beams and slabs d- Check development length 3- Design of reinforced concrete columns
Assignments	- A list of all assignments and their due dates are listed below ***The following rules apply to all assignments:*** - All assignments represent 30% of the total course grade. - Assignments shall be delivered by the due date or will be marked of a maximum of 50%. - Assignments delayed for one week from due date will be rejected.
Expected performance	Students are expected to be familiar with computer programs for structural analysis (e.g. SAP 2000). Students shall also get familiar with engineering-programming such as MATLAB, MathCad and Excel. Examples in these programs will be used.

Grading	The grade of RC design represents **50% of CE310**		
	Component		**% Final Grade**
	Reinforced Concrete Assignments		15
	Reinforced Concrete Mid Term		15
	Reinforced Concrete Final		20
Tentative Assignment schedule	**Assignment**	**Due Date**	**Topic**
	Assignment 1	Jan. 31, 2012	Introduction
	Assignment 2	Feb. 8, 2012	Flexure Design
	Assignment 3	Feb. 15, 2012	Shear Design
	Assignment 4	Feb. 28, 2012	Development Length
	Assignment 5	March 4, 2012	Deflection Check
	Assignment 6	March 8, 2012	Column Design

CE 310 - RC Course Syllabus - Tentative Schedule

#	Date	Topic	Textbook
1	January 17	***Chapter 1:*** Introduction to RC Design	Ch. 1,2,3,R
2	January 18	***Chapter 1:*** Introduction to RC Design	Ch. 1,2,3,R
3	January 19	***Chapter 1:*** Introduction to RC Design	Ch. 1,2,3,R
4	January 24	***Chapter 1:*** Introduction to RC Design	Ch. 1,2,3,R
5	January 25	***Chapter 1:*** Introduction to RC Design	Ch. 1,2,3,R
6	January 26	***Chapter 3:*** Design of Flexural RC section	Ch. 4,5
7	January 31	***Chapter 3:*** Design of Flexural RC section	Ch. 4,5
8	February 1	***Chapter 3:*** Design of Flexural RC section	Ch. 4,5
9	February 2	***Chapter 4:*** Design of Flexural RC section	Ch. 4,5
10	February 7	***Chapter 4:*** Shear Design of RC Sections	Ch. 6
11	February 8	***Chapter 4:*** Shear Design of RC Sections	Ch. 6
12	February 9	***Chapter 4:*** Shear Design of RC Sections	Ch. 6
--	February 14	**RC MID-TERM (15 % of Total Grade)**	---
13	February 15	***Chapter 5:*** Development length	Ch. 8
14	February 16	***Chapter 5:*** Development length	Ch. 8
15	February 21	***Chapter 6:*** Concrete Deflection	Ch. 9
16	February 22	***Chapter 6:*** Concrete Deflection	Ch. 9
17	February 23	***Chapter 6:*** Concrete Deflection	Ch. 9
18	February 28	***Chapter 6:*** Concrete Deflection	Ch. 9
19	February 29	***Chapter 7:*** Design of RC columns	Ch. 11
20	February 1	***Chapter 7:*** Design of RC columns	Ch. 11
21	March 6	***Chapter 7:*** Design of RC columns	Ch. 11
22	March 7	***Chapter 7:*** Design of RC columns	Ch. 11
23	March 8	**RC FINAL EXAM (20 % of Total Grade)**	---
--	March 11-18	**SPRING BREAK**	---
--	March 20	**Starting Second Half: Design of Structural Steel Dr. Walter Gerstle**	----

- R-- Indicates other references provided by instructor in addition to textbook