

CE457 - Spring 2019

Reinforced Concrete Design

COURSE OUTLINE

WEEK	CHAPTERS	TOPICS
1/8,10	1,2	Introduction, Flexural Analysis of Beams
1/15,17*	3	Strength Analysis of Beam, ACI Code
1/22,24	4,5	Rectangular Beams, One-Way Slabs, T-Beams
1/29,31*	5	Doubly Reinforced Beams
2/5,7	6	Serviceability
2/12,14**	7	Bond, Development Lengths, and Splices
2/19,21	8	Shear and Diagonal Tension
2/26,28*	9,10	Columns, Short Columns, Axial Load and Bending
3/5,7	11	Slender Columns
3/19,21*	12	Footings
3/26,28	13	Retaining Walls
4/2,4**	14,15	Continuously Reinforced Concrete, Torsion
4/9,11	16,17	Two-Way Slabs
4/16,18*	18	Walls
4/23,25	19	Prestressed Concrete

* \implies Quiz on that day (1/17, 1/31, 2/28, 3/21, 4/18).

** \implies Midterm on that day (2/14, 4/4).

Final Examination – Tuesday, May 7, 2019, 8-10am.

Grading Policy:

5 equally weighted quizzes, drop one (8% each)	32%
3 equally weighted examinations (20% each)	60%
Written homework	8%

Reference Textbooks:

- Design of Reinforced Concrete, by Jack C. McCormac and Russel H. Brown, Ninth Edition, Wiley, ISBN 978-1-118-12984-5.

Course Website: <http://www-classes.usc.edu/engr/ce/457>