

# CE457 - Spring 2018

## Reinforced Concrete Design

### COURSE OUTLINE

WEEK	CHAPTERS	TOPICS
1/9,11	1,2	Introduction, Flexural Analysis of Beams
1/16,18*	3	Strength Analysis of Beam, ACI Code
1/23,25	4,5	Rectangular Beams, One-Way Slabs, T-Beams
1/30,2/1*	5	Doubly Reinforced Beams
2/6,8	6	Serviceability
2/13,15**	7	Bond, Development Lengths, and Splices
2/20,22	8	Shear and Diagonal Tension
2/27,3/1*	9,10	Columns, Short Columns, Axial Load and Bending
3/6,8	11	Slender Columns
3/20,22*	12	Footings
3/27,29	13	Retaining Walls
4/3,5**	14,15	Continuously Reinforced Concrete, Torsion
4/10,12	16,17	Two-Way Slabs
4/17,19*	18	Walls
4/24,26	19	Prestressed Concrete

\*  $\implies$  Quiz on that day (1/18, 2/1, 3/1, 3/22, 4/19).

\*\*  $\implies$  Midterm on that day (2/15, 4/5).

Final Examination – Tuesday, May 8, 2016, 8-10am.

### Grading Policy:

5 equally weighted quizzes, drop one (7% each)	28%
3 equally weighted examinations (20% each)	60%
Written homework	12%

### 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>