THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Advanced Reinforced Concrete

CIVILEN 7350

Credit Hours:
3.00 - 3.00

Course Levels:
Graduate (5000-8000 level)

Course Components:
Lecture

Course Description:
Advanced topics in reinforced concrete structural modeling, analysis, design and detailing.

Prerequisites and Co-requisites:
Prereq: 5350.

Course Goals / Objectives:
- Learn the effects of concrete confinement and column behavior
- Learn special detailing requirements for moment resisting frames under seismic or other loads
- Learn to design beam-column joints, lateral load resisting systems and shear walls
- Learn strut and tie model and design of deep beams

Course Topics:
- Analysis of column behavior, including confinement effects
- Design and detailing of beams in moment resisting frames, and ACI special provisions for seismic design
- Design and detailing of beam-column joints
- Design of lateral load resisting systems and shear walls
- Strut and tie model and design of deep beams
- Design of diaphragms, vertical or horizontal irregularities
- Serviceability and deflection considerations

Designation:
Elective