THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Prestressed Concrete Design

CIVILEN 5370

Credit Hours:
3.00 - 3.00

Course Levels:
Undergraduate (1000-5000 level)
Graduate (5000-8000 level)

Course Components:
Lecture

Course Description:
Design applications for prestressed concrete members and structures. Basic concepts to be covered include flexural and shear design, stress analysis, deflections, and prestress losses.

Prerequisites and Co-requisites:
Prereq: 4350.

Course Goals / Objectives:
- Design prestressed, precast and composite concrete members and structures
- Learn flexural shear and torsional design, prestress losses, stresses and deflections in prestressed and precast concrete members

Course Topics:
- Concrete and prestressing steel material properties
- Analysis and design of prestressed members for flexure
- Methods and basic concepts related to stresses and loads
- Analysis and design of prestressed members for shear
- Short-term and long-term deflection considerations, deflection control and cracking
- Prestress losses.
- Design of composite members
- Torsional effects.
- Complete design examples.

Designation:
Elective