

Department: Civil Engineering
Number: CE 5323
Title: Prestressed Concrete

Class Schedule: TR 3:00 – 4:20 p.m.

Instructor: Cesar Carrasco Ph.D.
Department of Civil Engineering
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Office Hours: Open

Catalog Description: Theory, advantages, and limitations; various systems of prestressing; composite construction; continuous span theory.

Prerequisite: Instructor approval

Reference book: Prestressed Concrete Analysis and Design (Third Edition), Antoine E. Naaman, Technopress 3000, 2012

ACI 318-11: Building Code Requirements for Structural Concrete

Course Objectives: This course seeks to familiarize the student with the theory and practice used in the design and analysis of prestressed concrete structures. At the end of the course the student should be able to analyze and design flexural members under pre and post tensioning for ultimate strength and serviceability requirements.

Topics Covered:

1. Introduction
2. Design philosophy
3. Design of prestressed concrete members for flexure
4. Calculation of deflection
5. Prestressing losses

Grades:

Your grade for this course will be assessed based on your performance in mid-term exams and projects (60%), homework and quizzes (10%) and final exam (30%).