

Summer 2019

CE 632-851: Design of Prestressed Concrete Structures

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JOHN A. REIF, JR. DEPARTMENT OF
**CIVIL AND ENVIRONMENTAL
 ENGINEERING**



CE 632 - Design of Prestressed Concrete Structures
 Section: 851

Summer 2019

Text: Naaman, Antoine E., Prestressed Concrete Analysis and Design Fundamentals, 3rd Edition
 Techno Press 3000, ISBN: 978- 0- 9674939- 2- 3

Instructor: Anthony Massari, PE, atm2@njit.edu

Prerequisites: Analysis and Design of pre- tensioned and post- tensioned prestressed concrete elements for both determinate and indeterminate structures will be studied. Examples of prestressed elements used in buildings and bridges will be discussed, as well as the source and magnitude of prestress losses.

Week	Topic	Reading
1	Introduction, Prestressing Methods, Prestressing Systems, General Design Principles	Chapter 1
2	Materials for Prestressing	Chapter 2
3	The Philosophy of Design	Chapter 3
4	Flexure – Working Stress Design	Chapter 4
5	Flexure – Ultimate Strength Design	Chapter 5
6	Mid-Term Exam	
7	Shear Design	Chapter 6
8	Serviceability Design and Analysis	Chapter 7
9	Computation and Types of Prestress Losses	Chapter 8
10	Indeterminate Analysis	Chapter 10
11	Final Exam	

Grading

1. Homework	20% (must do all homework)
2. Mid Term Exam	40%
3. Final Exam	<u>40%</u>
	100%

*The NJIT Honor Code will be upheld, and any violations will be brought to the immediate attention of the Dean of Students.

*Students will be consulted with by the instructor and must agree to any modifications or deviations from the syllabus throughout the course of the semester.