

New Jersey Institute of Technology		
Department of Civil and Environmental Engineering		
CE 632 - Design of Prestressed Concrete Structures		Online Course Summer 2017
Text:	Naaman, Antoine E., Prestressed Concrete Analysis and Design: Fundamentals, 3rd Edition, Techno Press 3000, ISBN: 978-0-9674939-2-3	
Referenced Text:	ACI 318 - 11 - Building Code Requirements for Structural Concrete and Commentary; PCI Design Handbook, Precast and Prestressed Concrete - 6th Edition; Post Tensioning Manual, 6th Edition	
Instructor:	Anthony Massari Email: amassari@caltech.edu	
Course Description:	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.	

Prerequisites: CE 333

Week	Topics	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	EXAM 1	
7	Design for Shear	Chapter 6
8	Servicability Design and Analysis	Chapter 7
9	Computation and Types of Prestress Losses	Chapter 8
10	Indeterminate Analysis	Chapter 10
11	Final Exam	

Basis of Grading

Homework	20%
Midterm	40%
Final Exam	40%

Notes: The NJIT Honor Code will be upheld and any violation will be brought to the immediate attention of the Dean of Students

Homework will be assigned almost every week but will not be graded regularly. You will be on your honor to complete the assignments. Random homework sets will be required to be mailed to the instructor to confirm adequate progress is being made in your studies. You will not be graded on correctness, but for honest effort in attempting the assignment to completion. **You are expected to complete all assignments to the best of your abilities. If you show honest effort in the collected assignments, you will receive full credit.**