

New Jersey Institute of Technology
Department of Civil & Environmental Engineering

CE 615 - Infrastructure and Facilities Remediation

Summer 2017

Text	Feld, Jacob and Carper, Kenneth, Construction Failure, 2nd Edition, Wiley, Interscience, ISBN: 0-471-57477-5	
Instructor	Adjunct Professor Scott Derector: email address: sed3@njit.edu Office Hours by Appointment Only	
Prerequisite	Graduate standing in Civil Engineering and basic knowledge of structures, and material science.	
Course Description	Examine the methodology of inspection, field testing, evaluation and remediation of existing infrastructure and facilities, which include pipelines, tunnels, bridges, roadways, dams and buildings. Typical material distress and failure scenarios will be covered with remediation options through the use of case studies.	
Week	Topic	Reading/Homework
1	Introduction- Failures, Inspection, Responsibility	Ch. 1, 2, 3
2	Corrosion	P. 228-231, 281-287
3	Concrete, Concrete Testing and Repair	Ch. 7, 8 P. 422-429
4	Masonry, Curtain Walls, Roofs	Ch. 9 and 10
5	MidTerm	
6	Foundations, Structural Steel	Ch. 3 and 6 P. 130-157
7	Timber	Ch. 5
8	Dams and Bridges	Ch. 4
9	Pipelines, Sewers, Tunnels	
10	Construction Safety, Litigation	Ch. 11, 12
11	Final Exam	

MidTerm	30%
Final	30%
Term Paper/ Presentation	30%
Homework	10%

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

* Any modifications or deviations of the syllabus throughout the semester will be made through consultation and agreement with the class.