

DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING

CE 742

Spring 2017

Text: Geotechnical Earthquake Engineering by Steven L. Kramer, ISBN # 0133749436, Prentice-Hall, Englewood Cliffs, NJ

References:

- Dynamics of Soil Structure Interaction by J. P. Wolf, 1985, ISBN 7-314-00492-7, Prentice-Hall, Englewood Cliffs, NJ
- Soil Dynamics by S. Prakash, 1981, ISBN 0471846864, McGraw-Hill, New York
- Ground Motion and Soil Liquefaction During Earthquakes by H. B. Seed and I. M. Idris, 1981, Earthquake Engineering Research Institute, Oakland, California, Monograph Series, 134 p.
- *Foundation Vibration Analysis Using Simple Physical Models* by J. P. Moore, 1994, Prentice-Hall, Englewood Cliffs (NJ)
- Principles of Soil Dynamics by Braja M. Das, 1992, ISBN 0534931294, PWS-KENT Publishers
- Soil Behavior in Earthquake Geotechnics by Kenji Ishihara, ISBN: 10: 0198562241

<u>Week</u>	<u>Content</u>	<u>Chapter</u>
1	Earthquakes	2&3
2-3	1-Vibrations	Appendix
4	Response Spectra	4
5	Site specific Response Spectra & Ground Motion	Notes
6	SHAKE	Notes
7	Site-specific Analysis	5&6
8	Midterm	
9-10	Soil Liquefaction	9
10	Design Project	Notes
11	Design of Machine Foundations	Notes
12	Design of Slopes subjected to earthquakes	10
13	Design of Retaining Walls subjected to earthquakes	11
14	Soil Improvement	12
15	Final	

Location: 310 CKB

Grade: 25% Home Work, 25% Design Project, 25% Mid-term, 25% Final

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Note: The NJIT Honor Code will be upheld, and that any violations will be brought to the immediate attention of the Dean of Students. Also, students will be consulted by the instructor and all must agree to any modifications or deviations from the syllabus throughout the course of the semester.