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CE 742-102: Geotechnical Earthquake Engineering

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DEPARTMENT OF CIVIL & ENVIRONMENTAL ENGINEERING

CE 742
Section 102

Spring 2019

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
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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Office Hours: W 4:00-6:00PM and M-F 10-4 by appointment

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