CIVL 7137/8137
Geotechnical Earthquake Engineering
Spring 2024
THE UNIVERSITY OF MEMPHIS
http://www.ce.memphis.edu/7137

*Professor’s Name:* Dr. Shahram Pezeshk; EN 104A
 Office Phone: 678-4727

 Email: spezeshk@memphis.edu

*Hours Credit:* 3 Semester Hours

*Office Hour:* Open door policy; ES104A

*Course Meetings:* 8:00 – 9:25 AM, TR, ES114

*Textbook:* Kramer, L. (1996). “Geotechnical Earthquake Engineering,” Prentice Hall, ISBN 0-13-374943-6, New Jersey.

COURSE DESCRIPTION

Theory and measurements of dynamic properties of soils and their applications in seismic hazard assessments, earthquake engineering design, and geophysics studies.

GRADING

The final grades for the course will be based on the following percentages:

 Homework/Projects 70%
 Exams 30%
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 100%

* M. L. King, Jr. Holiday: **January 15, 2024/ Monday**
* First Day of Classes: **January 16, 2024 / Tuesday**
* Spring Break: **March 4-10, 2024 / Monday-Sunday**
* Last Day of Classes: **April 24, 2024 / Wednesday**
* Study Day: **April 25, 2024 / Thursday**
* Exams: **April 26 - May 2, 2024 / Friday-Thursday**
* Final Exam: R, Dec8, 10:30 AM – 12:30 PM

**TOPICS**

 Chapter 1. Introduction to Geotechnical Earthquakes Engineering

 Chapter 2. Seismology and Earthquakes

 Chapter 3. Strong Ground Motion

 Chapter 4. Seismic Hazard Analysis

 Chapter 5. Wave Propagation

 Chapter 6. Dynamic Properties

 Chapter 7. Ground Response Analysis

 Chapter 8. Local Site Effects and Design Ground Motions

Chapter 9. Liquefaction