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  
   
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*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