

# CIVL 7137/8137

## Geotechnical Earthquake Engineering

Fall 2009

THE UNIVERSITY OF MEMPHIS

<http://www.ce.memphis.edu/7137>

*Professor's Name:* Dr. Shahram Pezeshk; EN 104B  
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*Hours Credit:* 3 Semester Hours

*Office Hour:* Open door policy

*Course Meetings:* 5:30 - 6:55 P.M., Monday and Wednesday, EN 114

*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	35%
Exams	30%
Final Exam	35%
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	100%

October 19-21 - Fall Break

December 9 – Last day of Classes

Final Exam: December 16, 2009; 5-30 - 7:30 pm

See <http://www.memphis.edu/registrar/calendars/academic/ay0910.htm> for more detailed Academic Calendars.

## **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