



**Course Name:**

An Introduction to Geotechnical Earthquake Engineering

<b>Course Number:</b> -	<b>Credit:</b> 3
<b>Program:</b> Undergraduate	<b>Course Type:</b> Technical elective
<b>Prerequisite:</b> Foundation Engineering	<b>Corequisite:</b> -

**Course Content (outline):**

- Introduction
- Fundamentals of Seismology & Earthquake Engineering
- Dynamic Characteristics & Properties of Soils
- Propagation of Earthquake Waves & Local Site Effects
- Seismic Design Considerations of Foundations
- Liquefaction & Its Hazards
- Seismic Behavior of Slops & Landslide
- Seismic Behavior of Retaining Walls

**References:**

- Principles of Soil Dynamics, Braja M. Das, 1993, PWS-KENT Pub. Company, ISBN No.: 0-534-93129-4.
- Geotechnical Earthquake Engineering, Steven L. Kramer, 1996, Prentice-Hall, ISBN No.: 0-13-374943-6.
- Soil Dynamics, Shamsheer Prakash, 1981, Mac Graw Hill.
- Geotechnical Earthquake Engineering, Ikuo Towhata, 2008, Springer.
- Soil Dynamics & Earthquake Geotechnical Engineering, B. Adimoolam & S. Banerjee, 2019, Springer.
- Related Journals, Conference Proceedings and Reports and Experiences of Instructor.