



Faculty of Earth Sciences



Geophysics Department



The Geological Society
Accredited degree courses

EARTHQUAKE ENGINEERING

Course Name	Course ID	Prerequisite
<i>EARTHQUAKE ENGINEERING</i>	<i>EGP 372</i>	<i>EGP 211</i>

Time Table for Course Lectures

EARTHQUAKE ENGINEERING (EGP 372)

Week	Topic
1	Introduction to Earthquake Seismology. What We Feel in an Earthquake (Look at Pakistan Earthquake, 2005) ^[1]
2	Some Basic Definitions (Structural Geological and Geophysical Terms in Seismology) ^[2]
3	Seismic Waves ^[3]
4	Test 1
5	Seismographs and Earthquake Location ^[4,5]
6	Earthquake Properties (Magnitude, Intensity, Energy, Depth, Origin Time, etc...) ^[6,7]
7	Test 2
8	Exploring Inside the Earth Using Seismological Data. ^[8,9]
9	Seismic Radiation Patterns and Earthquake Focal Mechanism ^[10,11]
10	Earthquake Prediction ^[12-14]
11	Test 3
12	Earthquake Engineering ^[15]
13	Earthquake Hazard Mitigation and Risk-Reduction ^[16]
14	Revision and Raised Questions
15	Final Exam

References:

- [1] *Earthquakes-4th Edition*, by Bolt, B.A., 1999. W.H. Freeman & Company, NY, USA. Chapter-1
- [2] Internet (www.sciencecourseware.com/eec/earthquake/assessment)

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- [3] *Seismology*, by Doyle, H., 1995. John Wiley & Sons, NY, Toronto. Chapter-2
- [4] *Seismology*, by Doyle, H., 1995. John Wiley & Sons, NY, Toronto. Chapter-3
- [5] *Earthquakes-4th Edition*, by Bolt, B.A., 1999. W.H. Freeman & Company, NY, USA. Chapter-3
- [6] *Seismology*, by Doyle, H., 1995, John Wiley & Sons, NY, Toronto. Chapter-4
- [7] *Introduction to seismology*, by Bath, M., 1973. John Wiley and Sons, NY, Chapter-4
- [8] *Earthquakes-4th Edition*, by Bolt, B.A., 1999. W.H. Freeman & Company, NY, USA. Chapter-4
- [9] *Introduction to Seismology*, by Shearer. P.M., 1999. Cambridge University Press. Chapter-4
- [10] *Seismology*, by Doyle, H., 1995, John Wiley & Sons, NY, Toronto. Chapter-6
- [11] *Introduction to seismology*, by Bath, M., 1973. John Wiley and Sons, NY. Chapter-6
- [12] *Seismology*, by Doyle, H., 1995, John Wiley & Sons, NY, Toronto. Chapter-8
- [13] Chapter-10 (Bath, 1973)
- [14] *Introduction to Seismology*, by Shearer. P.M., 1999. Cambridge University Press. Chapter-10
- [15] *Seismology*, by Doyle, H., 1995, John Wiley & Sons, NY, Toronto. Chapter-7.
- [16] *Earthquakes-4th Edition*, by Bolt, B.A., 1999. W.H. Freeman & Company, NY, USA. Chapters11&12