Faculty of Earth Sciences

Geophysics Department

The Geological Society
Accredited degree courses

VIBRATORY SYSTEM

Course Name	Course ID
VIBRATORY SYSTEM	*EGP 411*

Course Description

Principles of vector algebra, Newton's laws of motion, harmonic motions, general motion of three degrees of freedom of a free particle, dynamics of particles with respect to rotational axes. Effects of rotation of earth, Spherical pendulum

Course Objectives

1. Enhance the student's understanding of the physics and mathematics of vibration systems.
2. Shed the light on the application of vibration theory in geophysics.
3. Understand the physical basis of the vibration measuring instruments.
4. Understand the basis for the decay and amplification of the propagating vibratory motion.

General References for the Course: (Books/Journals…*etc*.)

Students in this course can read from:

1. *Mechanical Vibrations, 4th Edition,* by Rao, S.S., 2003. Prentice Hall.
2. *Theory of Vibration with Applications, 5th Edition,* by Thomson, W.T., and Dahleh, M.D., 1997. Prentice Hall.

List of URLs for this Course

- www.phy.ntnu.edu.tw/ntnujava

Course Outcome

The student will gain the general basic knowledge of mechanical vibrations and will be able to use this knowledge in his use of the application of geophysical methods or in seismology to relate observations to the fundamentals of the physics of mechanical vibrations.

Scheme of Assessment