Faculty of Earth Sciences

Geophysics Department

The Geological Society
Accredited degree courses

VIBRATORY SYSTEM

Course Name	Course ID
VIBRATORY SYSTEM	***EGP 411***

Time Table for Course Lectures

VIBRATORY SYSTEM (EGP 411)

Week	Topic
1	Introduction[1] The Si System of Units, Oscillatory Motion, Harmonic Motion
2	Complex Numbers, Exponential Form Fourier Series
3	Examples of F. S. Free Vibration, Equation of Motion
4	Viscously Damped Free Vibration Underdamped Case Overdamped and Critically Damped Case
5	Logarithmic Decrement Hw Problem Discussion and Review for the Exam
6	**Midterm Exam I** Harmonically Excited Vibration, Forced Harmonic Vibration
7	Complex Frequency Response Support Motion
8	Vibration Isolation Structural Damping, Sharpness Of Resonance Vibration Measuring Instruments
9	Transient Vibration, Impulse Excitation Arbitrary Excitation
10	Laplace Transform Formulation

	Laplace Transform Formulation
11	How Problem Discussion and Review for the Exam **Midterm Exam II**
12	Systems with Two or More Degrees of Freedom Systems with Two or More Degrees of Freedom
13	Rotational Systems, Coupld Pendulum Initial Conditions, Beating
14	Coordinate Coupling Forced Harmonic Vibration
15	Vibration Absorber

Reference:

[1] Theory of Vibration with Applications.