

GPH 301: Geophysical Exploration

Instructor:

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Course Information:

Credits: 3 hours (2+1)

Reference Books:

 An introduction to geophysical exploration (third edition) - P. Keary, M. Brooks, and I. Hill, Blackwell Publishing, 2002. ISBN: 0-632-04929-4

 Introduction to applied geophysics: Exploring the shallow subsurface - H.R. Burger, A.F. Sheehan, and C.H. Jones, W.W. Norton and Company, 2006. ISBN: 0-393-92637-0

Course Description:

Magnetic and gravity exploration, Geoelectric methods, Electrical resistivity, Self-potential and induced polarization, Electromagnetic methods, Seismic methods, Seismic reflection and refraction methods, Seismology, Ground penetrating radar, Radioactive and thermal methods.

Grades:

Based on examinations and class participation as follows:

■ 1 st Exam	10%
■ 2 nd Exam	10%
■ Homework	5%
■ Attendance	5%
■ Lab	30%
■ Final Exam	40%

Course Topics:

- Introduction
- Seismic Refraction Method
- Seismic Reflection Method
- Earthquake Seismology
- Electrical Method
- Gravity Prospecting
- Magnetic Method