

Geology 2112
PRINCIPLES OF GEOPHYSICS
Winter 2014

Lecture times:

Wednesday & Friday, 10:00-11:30p.m. CB3031

Instructor:

Dr. P.H. Gillies

Department of Geology

office hours: Thursday, 2:00-4:00p.m.

CB2022B

(807) 343-8328

e-mail: through d2L

Textbook:

An Introduction to Applied and Environmental Geophysics (2nd ed.) by John M. Reynolds (2011)

Optional: *Introduction to Applied Geophysics* by H.R.Burger, A.F.Sheehan, & C.H.Jones, (2006)
Field Geophysics (4th ed.) by John Milsom & Asger Eriksen (2011)

Additional Resources:

Paleomagnetism: **Free to download & print**

Butler, R. (1998), *Paleomagnetism: magnetic domains to geologic terranes*, Blackwell 319pp.

Available on-line: <http://www.geo.arizona.edu/Paleoma/book/>

<u>MARKS:</u>	Assignments:	40%
	Mid-term exam:	20%
	Final exam:	40%
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	TOTAL COURSE MARK:	100%

Course Objectives:

This course will cover a range of topics in theoretical and applied geophysics, with emphasis on understanding natural Earth processes and the scientific methods of remotely studying geologic structures. It is intended for geology and earth science majors, geoarchaeology students, and any others interested in the study of the earth, through the physics of the earth.

Expected topics to be covered:

Gravity
Magnetics
Seismics – reflection & refraction
Electro methods – e.g. resistivity, EM
GPR

Assessment Timing:

Midterm: Friday, 14 February, room UC1017

Final exam will be scheduled during exam period (9-17 April).

This course outline & marks distribution represent a plan for the course. The instructor reserves the right to modify the timing, grading, & the contents of the course in order to satisfy better the needs & abilities of the class.

Assignment Deadline Policy: Assignments are due at the beginning of class on the due date. Late assignments **will not be accepted** for marking.

Missed Mid-term Exam Policy: Absence only for University recognized activities (one week advance notice) & illness (same day notice, **prior to** test), supported by appropriate documentation, will be excused & re-scheduled.