

Geophysics Courses

Courses

GEOP 3320A. Introduction to Geophysics.

Introduction to Geophysics Survey course in geophysics that introduces students to the field of geophysics and its application to local, regional and global problems.

Department: Geophysics

3 Credit Hours

5 Total Contact Hours

3 Lab Hours

2 Lecture Hours

0 Other Hours

Prerequisite(s): (GEOL 3312 w/C or better)

GEOP 4167. Directed Study, Geophysics.

Directed Study, Geophysics (0-0-1) Directed study problems in geophysics; hours and subjects to be arranged with each student; for undergraduate students who wish to do work on a special problem. No student may receive credit for more than six hours of directed study work. Application of a directed study towards required upper-division elective hours in the major is subject to prior approval by the departmental undergraduate studies committee. Prerequisite: Junior standing and Department approval.

Department: Geophysics

1 Credit Hour

1 Total Contact Hour

0 Lab Hours

0 Lecture Hours

1 Other Hour

GEOP 4267. Directed Study, Geophysics.

Directed Study, Geophysics (0-0-2) Directed study problems in geophysics; hours and subjects to be arranged with each student; for undergraduate students who wish to do work on a special problem. No student may receive credit for more than six hours of directed study work. Application of a directed study towards required upper-division elective hours in the major is subject to prior approval by the departmental undergraduate studies committee. Prerequisite: Junior standing and Department approval.

Department: Geophysics

2 Credit Hours

2 Total Contact Hours

0 Lab Hours

0 Lecture Hours

2 Other Hours

GEOP 4306. Meteorology.

Investigation of the physical principles upon which weather and climate are based, to provide an interpretation of atmospheric phenomena and an introduction to physical and dynamical meteorology. Topics include physical and chemical bases of atmospheric phenomena, the role of the atmosphere in the earth system, and the processes causing atmospheric motions, precipitation, and Earth's climate. Prerequisite: MATH 2313 and PHYS 2421 each with a grade of C or better.

Department: Geophysics

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

3 Lecture Hours

0 Other Hours

Prerequisite(s): (MATH 2313 w/C or better) AND (PHYS 2421 w/C or better) OR (PHYS 2121 w/C or better AND PHYS 2321 w/C or better)

GEOP 4336. Intro. to Remote Sensing.

Introduction to Remote Sensing (2-3) An introduction to acquisition, processing, and interpretation of remote sensing data acquired from both satellites and aircraft. Applications in earth and environmental sciences are stressed as is understanding how to obtain and employ the many types of data that are available. Topics covered include basic mapping concepts, how sensors work, the structure of remote sensing data and analysis, thermal and radar techniques, data processing, and classification schemes. Laboratory work is primarily computerized exercises. Corequisite: PHYS 1404 or PHYS 2421. Prerequisites: GEOL 1301 or GEOL 1303, and GEOL 1302 or GEOL 1304.

Department: Geophysics

3 Credit Hours

5 Total Contact Hours

3 Lab Hours

2 Lecture Hours

0 Other Hours

Prerequisite(s): (GEOL 1103 w/C or better AND GEOL 1313 w/C or better) AND (GEOG 1106 w/C or better AND GEOG 1306 w/C or better)

Corequisite(s):

GEOP 4350. Field Geophysics.

Field Geophysics A 3-week course in field applications of seismic and nonseismic methods. Students will conduct geophysical surveys, process and model collected data and make oral and written presentations.

Department: Geophysics

3 Credit Hours

16 Total Contact Hours

0 Lab Hours

0 Lecture Hours

16 Other Hours

Prerequisite(s): (GEOP 3320A w/C or better)

GEOP 4367. Directed Study, Geophysics.

Directed Study, Geophysics (0-0-3) Directed study problems in geophysics; hours and subjects to be arranged with each student; for undergraduate students who wish to do work on a special problem. No student may receive credit for more than six hours of directed study work. Application of a directed study towards required upper-division elective hours in the major is subject to prior approval by the departmental undergraduate studies committee. Prerequisite: Junior standing and Department approval.

Department: Geophysics

3 Credit Hours

3 Total Contact Hours

0 Lab Hours

0 Lecture Hours

3 Other Hours

GEOP 4420A. Applied Geophysics I-Nonseismic.

Applied Geophysics I-Nonseismic The application of gravity, magnetism heat flow, electrical and electromagnetic techniques to mineral, petroleum, environmental, engineering and whole Earth exploration.

Department: Geophysics

4 Credit Hours

6 Total Contact Hours

3 Lab Hours

3 Lecture Hours

0 Other Hours

Prerequisite(s): (GEOP 3320A w/C or better AND GEOP 3320B w/C or better) AND (PHYS 2421 w/C or better) OR (PHYS 2121 w/C or better AND PHYS 2321 w/C or better)

GEOP 4420B. Applied Geophysics II-Seismic.

Applied Geophysics II-Seismic The application of gravity, magnetism, heat flow, electrical and electromagnetic techniques to mineral, petroleum, environmental, engineering and whole Earth exploration.

Department: Geophysics

4 Credit Hours

6 Total Contact Hours

3 Lab Hours

3 Lecture Hours

0 Other Hours

Prerequisite(s): (GEOP 3320A w/C or better AND GEOP 3320B w/C or better) AND (PHYS 2421 w/C or better) OR (PHYS 2121 w/C or better AND PHYS 2321 w/C or better)