

**11. Physical Geology Laboratory (1)**

Prerequisite: Geol 1 concurrently or permission of instructor. Introductory laboratory study of minerals, rocks, topographic maps, and geologic maps; land forms and geologic structures as shown by maps and models. One-day field trip required. (2 lab hours)

**2. Historical Geology (3) (Former Geol 1B)**

Prerequisite: Geol 1 or equivalent. Survey of earth's history revealed by the rock sequence. May include field trips.

**5. Topographic Maps (2)**

Not open to students with credit in Geol 5A or B. Prerequisite: Geol 1. Principles and techniques of topographic map interpretation; land forms as influenced by geologic structures and physiographic history; exercises with geologic maps and structure sections. (1 lecture, 2 lab hours)

**12. Physical Mineralogy (2) (Former Geol 12A)**

Identification of common rock-forming minerals by means of physical properties. (1 lecture, 3 lab hours)

**13. Determinative Mineralogy (2) (Former Geol 12B)**

Prerequisite: Geol 12, Chem 2A-B; or equivalent. Mineral identification by means of chemical and blowpipe analysis. (1 lecture, 3 lab hours)

**20. Meteorology (3) (Former Geog 5)**

Weather analysis; factors basic to weather forecasting and climatological studies. (One 2-hour Saturday field trip required.)

**25. Engineering Geology (3)**

Not open to freshmen. For engineering students. Principles of physical geology; application of geology to engineering structures and projects.

**101. Petrology (3)**

Prerequisite: Geol 1, 12 (or concurrently). Common rock-forming minerals; origin, classification, textures, and structures of igneous, sedimentary, and metamorphic rocks; examination of rocks in the hand specimen. (2 lecture, 2 lab hours)

**105. Geomorphology (3)**

Prerequisite: Geol 2, or permission of instructor. Land forms, their origin and development; regional problems. May include field trips.

**106. Structural Geology (3)**

Prerequisite: Geol 2, 5; or permission of instructor. Structural arrangements of rocks; intrusive and extrusive rock structures; folding and faulting; unconformities; applications to geophysical prospecting. May include field trips. (2 lecture, 2 lab hours)

**107. Field Geology Methods (2)**

Prerequisite: Math C. Field trips to introduce students to methods and instruments used in geologic field work. (1 lecture; field hours—4 weekly until spring vacation, 8-hour Saturday trips thereafter.)

**108. Field Geology (4-6; max total 6) Summer only**

Prerequisite: geology major or permission of instructor. Geologic reconnaissance and application of instrumental methods in geologic mapping and written report of area selected for study.