

GEOL 3708 - Geological Field Methods

Fall 2026 Syllabus, Section 01, CRN 43544,

Credit hours: 2

Public Instructor Information

Instructor Title: Dr. Beej Spieler

Instructor Professional Qualifications:

Ph. D., Physical Geography, Kent State University - 2014

Master's of Science, Structural Geology, Kent State University - 2005

Bachelor's of Science, Earth Science Education, Youngstown State University - 2002

Instructor Office Location: Moser 2075

Instructor Office Phone: 330-941-2293

Course Description

3708. Geological Field Methods. A course designed to develop skills and confidence in field-based sampling, data collection and analysis of results.

Two one to two day field trips are required. Prereq.: GEOL 2600 and 3718 or permission of instructor. 2 s.h.

This course provides students with knowledge of geologic problems encountered in fieldwork and the techniques utilized to solve those problems.

The student is exposed to geologic and topographic maps as well as various geologic instruments. Special emphasis will be given to field sketching, description and identification of rocks and geologic features. The course also consists of planned trips with overnight stays to areas of geologic interest. Summary reports, field exercises, and laboratory problems constitute the students' work responsibility.

Course Readings

Group	Title	Author	ISBN
	Manual of Field Geology	Robert Compton	

No textbook is required, though a copy of Robert Compton's Manual of Field Geology is strongly suggested (Available on Amazon \$34 - <https://a.co/d/0gta0xla>; AND on Thriftbooks Geology in the Field book by Robert R. Compton for \$12.50), as well as a good, durable field notebook of your own choosing. Rite-in-the-Rain notebooks are recommended. A hand lens will also be required.

Geology in the Field, 1985, Robert R. Compton, John Wiley & Sons.

The course readings are subject to change in the event of extenuating circumstances, research developments, current events, and/or to ensure better learning.

Schedule of Topics and Assignments

Week of	Reading(s)	Proposed Topic	Due/To Prepare for Class
8/24	Ch. 1 Philosophy and Organization of a Field Study Ch. 2 Basic Equipment and Its Uses	Introduction to Field Work; Setting up a field notebook; Components of sketching	
8/31	3. Basic Procedures at Outcrops 4. Identifying Rocks in the Field	Sediment analysis Rock and mineral ID refresher	Rock ID and sediment chart due 9/9
9/7	5. Mapping Rock Units and Structures	Using a Brunton compass Shooting a bearing, pacing	
9/14		Campus mapping, sketching – WEATHER PERMITTING	Map and sketches; Due 9/23
9/21		Downtown mapping – WEATHER PERMITTING	Map due 10/7
9/28		Soil analysis	Soil Evaluation paper; Due 10/7

10/5		Topographic profiles and contour lines	Topo profiles and Contour line diagrams; Due 10/14
10/12	Ch. 11 Stratigraphic Sections	Creating a stratigraphic column Lithological symbols	
10/19		Campus Contouring using surveying equipment – WEATHER PERMITTING	
10/26		Campus Contouring using surveying equipment – WEATHER PERMITTING	Due 11/18
11/2		MCP Trip – WEATHER PERMITTING	Field notebook due 11/13; drop off at my office during office hours.
11/9		NO CLASS - VETERAN'S DAY	Work on field notebooks.
11/16		Virtual Field Trip	
11/23		NO CLASS - THANKSGIVING	
11/30		Virtual Field Trip continued	Due during finals week; information to be shared before beginning.
12/7		FINAL PROJECT DUE	

The course schedule, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.