

GEOGRAPHY 180: FIELD METHODS FOR PHYSICAL GEOGRAPHY SPRING 2016

Friday 1-3, 55A McCone; 3-5 pm, see below

PROFESSOR:

Dave Wahl
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Office Hours: Wednesdays 2-3 pm or by appointment
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COURSE DESCRIPTION:

Physical geographers employ a wide range of field techniques to explore phenomena at the earth's surface. This course is intended to give students practical experience in designing and implementing a research project in physical geography. We will complete several projects, during the course of which you will learn to use field instruments and computer techniques for recording, analyzing, and presenting data. This course is not intended as an exhaustive survey of field techniques; rather it will provide the framework for exploring ways of approaching research questions in physical geography.

As this is a field-oriented class, you should be prepared for conditions associated with outdoor work. We may be working in inclement weather, steep terrain, running water, and dense vegetation (possibly including poison oak!). We may be camping in remote areas without established facilities. If you have concerns about any aspects of the course you should talk to the instructor during the first week of classes.

COURSE REQUIREMENTS:

Class meetings: We will use our class time for lectures, reading seminars, equipment demonstrations/data collection, computer labs, and field trip preparation. It is very important that you attend meetings; you are responsible for any material you miss.

Reading: There is no required text, although there will be several reading assignments and seminar style discussions of topical papers. You are fully expected to have read the material prior to the class meeting and come prepared for a discussion.

Homework: Several homework assignments will be given out during the course. These assignments are designed to give you experience using both the field equipment and computer programs you have been introduced to.

Materials/Costs: You will need a field book, which I will have for you next week. A camera (even just a disposable) will be needed to document your field work. We will also have to pitch in for food on the fieldtrips. You will need clothes that you don't mind getting dirty and/or ripping. Field clothes should be long-sleeved and -legged and your shoes should be close-toed. You will also need rain gear (cheap nylon or plastic will do).

Equipment: Equipment required to carry out the homework assignments will be available for check out through Dan Plumlee. I will itemize the camping items (gear and clothing) you will need before our first overnight trip.

Projects: Each student will be responsible for a research project that will be carried out at one of the field sites. Students will choose a project topic, plan it under the guidance of the instructor, and supervise the collection of data in the field. Each student will use their project to produce a 20 page paper and a 20 minute presentation.

Field Trips: The projects will be carried out during three weekend (Friday-Sunday) field trips. Attendance on all field trips is essential for a passing grade in the course.

GRADING:

(25%) Homework exercises- Several exercises that will require you to apply the methods introduced in class meetings.

(15%) Participation- This will be based on attendance, class discussions, and effort in the field.

(15%) Research Proposal- Outline of project and literature review.

(30%) Written report- A 20 page report on your field project.

(15%) Oral Presentation- A 20-minute conference style presentations of your research.

GEOGRAPHY 180—FIELD METHODS FOR PHYSICAL GEOGRAPHY

schedule subject to change

| Week | Date | Topic | Location | Time |
|-------------------------|----------------|---|---------------------------|------------------|
| 1 | 1/22 | Introduction | 55A McCone | 1-2 pm |
| 2 | 1/29 | Basic surveying, field note taking Compass and level surveying | 55A McCone | 1-3 pm 3-5 pm |
| 3 | 2/5 | Field Sites, Research Design, Proposals Optical level surveying | 55A McCone | 1-3 pm 3-5 pm |
| 4 | 2/12 | Sediment coring/ sediment analysis Richmond Field Station--coring | 55A McCone | 1-3 pm 3-5 pm |
| 5 | 2/19 | Total station surveying | 55A McCone | 1-3 pm 3-5 pm |
| 6 | 2/26 | Global positioning systems GPS: Trimble System | 55A McCone | 1-3 pm 3-5 pm |
| 7 | 3/4 | Plant taxonomy and identification Vegetation surveying /Botanical Garden <i>**Proposals Due**</i> | 55A McCone | 1-3 pm 3-5 pm |
| 8 | 3/11 | GIS Lecture GIS Lab | 535 McCone | 1-3 pm 3-5 pm |
| 9 | 3/18 | Dendrochronology/Tree Ring Analysis Dendro Lab | 55A McCone 535 McCone | 1-3 pm 3-5 pm |
| Spring Break | 3/25 | | | |
| 11 | 4/1 | Field Trip Prep | 55A McCone | 1-5 pm |
| 12 | 4/8-10 | Field Trip: TBA | Rear of McCone | 1 pm |
| 13 | 4/15-17 | Field Trip: TBA | Rear of McCone | 1 pm |
| 14 | 4/22-24 | Field Trip: TBA | Rear of McCone | 1 pm |
| 15 | 4/29 | Directed Research | | 1-5 pm |
| 16 | 5/6 | Research presentations | 55A McCone | 1-5 pm |
| Finals | 5/10 | Research Papers Due, 12 pm | online | |