

GEOG 8960: Seminar – Special Problems in Physical Geography – syllabus

Field studies – Measuring changes in a changing world

- AU22 Semester
- Class Number: 35816
- 3 credits; Graded S/U
- Days & Times: Wednesday, 3-5:48 pm
- Room: DB 1116
- Instructor: Bryan G. Mark, Geography & Byrd Polar

This graduate seminar will take a case study approach to critically consider the history, current challenges and opportunities, and future prospects for conducting and teaching field studies in our changing world. We will consider a wide range of applications and take an interdisciplinary approach, welcoming students from all subfields and disciplines.

All currently enrolled graduate students are welcomed; no specific background is required. A goal is to share ideas and perspectives across subfield disciplines that might inform novel insights and innovative practices of field studies.

Class structure:

This is a 3 credits hour graduate seminar. Class will convene for 3 hours per week and will feature lectures and discussions of readings from current scientific literature. After a few initial lectures by the instructor to introduce the topic and present examples from his own research, the class will run as a series of student led discussions of readings relating to field studies of a topic of their choice, then presentations of final case study reviews or proposals.

Collectively, we will discuss different topics directed by the interests of participants. Each week, a different student (or pair of students) will be responsible for selecting research articles to discuss related to some aspect of field research related to their area of interest, and then leading the discussion.

All students will be required to complete all the readings before class and will submit at least **two discussion questions** related to the reading to the instructor by email before class.

Over the semester, each student will develop an independent project that will culminate in a final written form, either as a review paper or proposal.

Also, students will make and record daily observations of their own of either the weather/climate or another environmental variable and summarize them monthly (3).

Evaluation:

Active involvement in the class readings and discussions is essential and expected of all students. Grades will be assessed based on student performance in:

1. Class participation (remember those discussion questions!);
2. Climate/env obs notebook
3. Topical presentations & discussion leading;
 - a. Selecting papers for class to read;

- b. Critical overview introductory lecture
 - c. Facilitating discussion
 - d. Final presentation of case study or proposal;
4. Final paper/proposal.

Student topical discussion leading

Students will take it in turn to lecture and lead discussion on a field study topic of their choice. We will potentially need to accommodate more than one topic per class (depending on the enrollment). Students leading discussion will select relevant papers (2-3) for the class to read and provide either a valid URL to access within OSU library system, or a digital copy (pdf format) to the instructor the **week before** they lead discussion. The papers should touch on both historical and modern examples of field studies to give perspective on change over time. All papers will be posted to the class Carmen page and all students will be responsible for reading them before class.

During the class period, the student leader will begin with a presentation to set the scene for discussion by introducing the topic, defining relevant terminology, and doing any necessary “teaching” of the papers. This may vary in style and length but should not exceed 30 minutes. Be creative! Use any (multiple) means of instruction, show-and-tell, or media. Students may even want to arrange a real-time interview via zoom with researchers or invite members of the OSU community to join the class discussion. For example, many researchers, professors, postdocs, or other graduate students on campus may have experiences or perspectives on field studies to enrich discussion of the topic.

Final case-study review or proposal components:

Students are required to produce some scholarly writing for a final paper – either in the form of a case study review, or a proposal for conducting and/or teaching relevant field studies. Being efficient and further progressing degree goals is encouraged (i.e. critically reviewing topic for thesis proposal, qualifying exam preparation, actual thesis content, or develop ideas for a future proposal of research or teaching).

Students may direct their attention to a many different challenges and opportunities related to field studies, e.g.: what physical process are you interested in? What relevant data are obtained in the field? How are those data acquired? Validated? What technology is involved, and how has that changed? How are measurements impacted by climate change? Who should be interested in the observations/measurements beyond scientists? How should other stakeholders be involved? How should field studies be taught?

All papers/proposals should address an historical development, current state of knowledge (challenges, opportunities), and prospects for the future direction and/or instruction of relevant field studies.

Class schedule (updated frequently)

<i>Date</i>	<i>Topics</i>	<i>Leaders</i>	<i>Readings</i>
Aug 24	Class intro	BGM	
Aug 31	Tracing glacier climate changes in mountains	BGM	
Sep 7	BGM away		
Sep 14			
Sep 21		Sara, Yue	
Sep 28			
Oct 5		Eva	
Oct 12		Emily	
Oct 19		Kara	
Oct 26			
Nov 2			
Nov 9			
Nov 16			
Nov 23	NO CLASS		
Nov 30			
Dec 7			

Observations notebook

We are discussing challenges and opportunities of field studies from inside a seminar room, with information gleaned from readings. However, there is no better way to appreciate measuring environmental changes than by actually doing so. For this part of the class, I expect you to make **daily observations and measurements** of basic environmental change around you. This should include at least basic climate variables (temperature, humidity, and precipitation – include additional as you like), and brief descriptions of the weather. But include any other relevant observations (e.g. flora, fauna, frost, etc). You are free to do this anyway you can. Just be consistent. And then also **synthesize your observations in monthly reports**, that include output from an established station with online data.