

**To: GES Undergraduates:**  
**From: Elizabeth Miller, Marty Grove, Jessica Warren, Sara Cina**  
**Re: Satisfying the undergraduate GES field requirement**  
**Date: August 13, 2013**

**Intent and content of the GES field requirement:**

Each GES undergraduate is required to undertake the equivalent of 6 weeks of instruction in geologic field methods. This memo is intended to clarify the intent and content of the GES field requirement, to announce the scheduling of courses related to fulfilling this requirement, and to explain possible alternative means to partially or completely satisfy the requirement.

**The Conventional Method to Meet the Field Requirement:**

The conventional and most straightforward way for undergraduates to meet the field requirement is to take GES 105 followed by two separate iterations of GES 190.

GES 105, *Introduction to Field Methods* is a two-week introduction to field techniques and geologic mapping that is taught every year and gives you the basic tools to undertake geologic research in the field. GES 105 is required of all GES majors and is the framework upon which all subsequent undergraduate field-related instruction is based. GES 105 is a pre-requisite for GES 190.

GES 190, *Research in the Field*, gives GES undergraduates additional training in field geology. This class provides undergraduates with a team-based experience of collecting data to answer research questions and is directed by highly knowledgeable faculty and graduate students.

By successfully taking GES 105 once and GES 190 twice, GES undergraduates will receive the broad experience and develop the confidence necessary to go out and evaluate a geological or environmental geology question by performing field-based data collection, mapping, sampling and research. The main goal is that, upon graduation, GES undergraduates will know how to plan and execute field research (see attached learning outcomes).

GES 105 and GES 190 are designed as Spring and Fall classes, so that you can conveniently work them into your quarter schedule. GES 105 will be offered at the beginning of summer, immediately following commencement. GES 190 will typically be offered near the end of the summer, prior to the start of Fall Quarter. Depending on instructor availability, GES 190 may also be offered during Winter Quarter, in which case it would consist of three 3-day weekend trips plus a 7-day trip over Spring Break.

### **Alternative Ways to Meet the Field Requirement:**

The GES field requirement can also be partially satisfied by taking a single four-to-six week geology field camp that is offered by another institution. This externally administered experience can be substituted for two GES 190 courses. While these field camps can be a great learning experience, they are administered and taught by non-Stanford personnel. You will thus need to make your own arrangements to participate in them and will have pay for them separately. Permission to satisfy the remaining 4 weeks of the field requirement with an external field camp must be explicitly granted by petitioning the undergraduate field committee with a short letter and link or description of the program you will participate in. This petition must be approved in the quarter before the field camp is to take place, and must clearly state the previous field-related training (GES 110, GES 105 are required) that you have received that will help you satisfactorily accomplish the desired learning outcomes in the external four-to-six week geology field camp. There are some good guidelines for choosing such a program at:  
<http://geology.isu.edu/FieldCamp/howto.htm>