

Geology Field Study Project

GEOL 3060 (3 Credits / 45 hours)

SIT Study Abroad Program:

Nepal: Geoscience in the Himalaya

PLEASE NOTE: This syllabus represents a recent term. Because courses develop and change over time to take advantage of unique learning opportunities, actual course content varies from term to term.

Course Description

Conducting research allows students to grapple with the complexity of a single topic in more depth. Students will gain the ability to propose, design, conduct, and communicate the results from Earth science field research. Initially, students maintain a journal of interests and research ideas during the first portions of the program. As the field study portion of the program approaches, each student or pair of students will meet with program instructors and an advisor to refine ideas to a focused research question that addresses aspects of either or both of the preceding field courses. After writing a brief proposal that articulates a viable research design and adheres to strict scientific and human ethics standards, students will carry out a field study project for approximately ten days. The final few days of the program will be spent reporting on projects and final debriefing sessions in Kathmandu.

Learning Outcomes

By the end of the course, students will be able to:

- a) Identify feasible and effective research questions in order to conduct an Earth science-related field study project;
- b) Write a field study project proposal which includes a methodology and an execution section;
- c) Collect and analyze data from a geological field study;
- d) Conduct field study in strict observance of scientific and human ethics including SIT's Human Subject Review policy;
- e) Assess geological and human implications of the results of data collected based on the initial research hypothesis;
- f) Communicate findings in a written report and oral presentation.

Course Requirements

Although the actual field study project will be conducted during the final third of the course, preparation for it will start at the beginning of the program. During the orientation in Kathmandu, students will be coached on maintaining a journal of research ideas and interests. At approximately the half-way period in the program, students will meet with the Academic Director or another advisor to hone ideas and develop a research plan. The research question may be aimed towards topics addressed in either of the preceding courses in the program (i.e. geologic history/processes or Earth-

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human interactions and hazards). A proposal for the field study project will be due near the end of the *Geohazards in the Himalaya* course. Students will be allowed to do the project either individually or in pairs. Students may request to do fieldwork in a variety of locations in the Central or Western Development regions of Nepal (http://en.wikipedia.org/wiki/Regions_of_Nepal) but any projects done in remote areas will have to be well justified and all project locations must be approved by the Academic Director. Projects conducted in remote areas must be done in pairs or with a Nepali companion (translator, guide, etc.). All projects involving human subjects will be reviewed by the local review board after students submit a human subjects' review application. The actual field research will be conducted over approximately ten days and then the entire group will convene in Kathmandu for three days of write-up time, presentations, and debrief. Students will receive a stipend for food/lodging but (as described in the program costs section of the webpage) they are responsible for transportation and other expenses such as translator, equipment, and supplies.

Evaluation and Grading Criteria

Description of Assignments

More detailed instructions and grading criteria will be given out at the start of each assignment. The paragraphs below provide general information.

Ideas journal: Students will maintain a journal of research ideas and topics of interest. Each student's journal must contain at least 5 significant and thoughtful entries. At about the mid-point of the course, students (either individually or in small teams) will meet at least once with the Academic Director or other program instructor to refine the ideas and develop a tractable research question and research project plan. Students must arrive at the meetings prepared to ask questions and present ideas. If working in a pair, the team should take pains to organize itself prior to arriving. All students must bring their journal to the meeting to refer to and take notes in.

Project proposal: This 2-3 page proposal will contain an abstract, description and significance of research question, research methods, and logistics (including schedule for making contact with the Academic Director). High quality documents will be clearly written and identify a tractable and worthwhile research question. The research plan will clearly address the research question and be executable in the ~10 day field research period.

Written Paper: This 10-20 page paper must contain the following sections:

Abstract

Introduction (including Research Question, Significance, Context/Background)

Methods

Results and Interpretations

Discussion/Recommendations

Conclusions

References

The text must be accompanied by appropriate figures and additional data or methods information may be included in appendices. An A-level project will: be innovative, address a topic of significance, clearly exhibit excellent grasp of major concepts, contain evidence of thorough data collection, be augmented by understandable figures, and be clearly but concisely written.

Presentation: In the final two days of the program, each student or student team will have 15-20 minutes to present project and findings. The talk portion should be about $\frac{3}{4}$ of the time and the remainder is for questions. Each person in a team must talk for approximately the same length of time. Excellent talks will be well practiced and demonstrate clear grasp of all concepts by all team

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members. Slides will be well composed and balance needed information with clear images and readability.

Reflection: Students will complete a final ~700-word reflection essay. Research (scientific research!) on learning shows very clearly that the ability to reflect on one's learning journey is an essential part of learning. Therefore, in this essay, students will think back to their own mental states prior to arriving on the program and describe how their scientific and social knowledge/understanding has changed over the course of the program.

Assessment:

Ideas journal & advisor meeting/s	4%
Project proposal	9%
Written paper & Reflection	62%
Presentation	25%

Grading Scale

94-100%	A
90-93%	A-
87-89%	B+
84-86%	B
80-83%	B-
77-79%	C+
74-76%	C
70-73%	C-
67-69%	D+
64-66%	D
below 64	F

Expectations and Policies

In order to best facilitate your learning, my expectations are as follows:

Engage your brain and ask questions

Be ready to contribute actively every day. Success in this program will require active participation.

Show up prepared

Be on time, have your readings completed, and points in mind for discussion or clarification.

Think critically

This course is designed to help you develop your critical thinking abilities; these life skills will help you analyze, infer, evaluate, and make reasoned judgments related to many facets of life.

All assignments must be completed on the due date/time

Written assignments received after the specified time will be considered late and as such, docked 10% per day. Any written assignments not received by 5 days after the due date will receive a zero. Presentations must be completed at the specified time. Exceptions will only be for serious medical reasons and extensions MUST be arranged before the due date/time.

Comply with academic integrity policies (no plagiarism or cheating, nothing unethical)

Respect differences of opinion (classmates', lecturers, local constituents engaged with on the visits)

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You are not expected to agree with everything you hear, but you are expected to listen across difference and consider other perspectives with respect.

Student research is a product of fieldwork and as such students have an obligation to assess both the positive and negative consequences of their field study. Ethical fieldwork, as stipulated in the SIT Statement of Ethics, results in products that are shared with local and academic communities; therefore copies of FSPs are returned to the sponsoring institutions and the host communities, at the discretion of the institution(s) and/or community involved. World Learning/SIT Study Abroad may archive, copy, or convert the FSP for non-commercial use, for preservation purposes, and to ensure future accessibility. World Learning/SIT Study Abroad archives all FSP in the permanent collection at the SIT Study Abroad local country program office and/or at any World Learning office. World Learning/SIT Study Abroad has a non-exclusive, perpetual right to store and make available, including electronic online open access, to the FSP. Students retain all ownership rights of the FSP product and retain the right to use all, or part, of a project in future works. Please refer to the Student Handbook or the Access, Use, and Publication of FSP form.

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