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GPHY 385.01: Field Techniques

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The University of Montana Department of Geography

GPHY 385- Field Techniques
Fall Semester 2014

Monday 12:10 – 1:00 PM, Wednesday 12:23- 2PM, Room 217 Stone Hall

Instructor: Tom Sullivan
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Office Telephone: (406) 243-4810
Email: thomas.sullivan@mso.umt.edu
Office Hours: TBD

Course Description

This course is intended to give you practical experience useful in designing and implementing a research project in geography. We will emphasize a variety of methods used by geographers in the field from both a qualitative and quantitative methodology by covering a number of subdisciplines. We will complete several field projects that coincide with the five traditions of geography—spatial, earth science, human/environment interaction, regions, and place/landscape. Example labs will include physical and spatial geographic work such as geomorphology (rockslides/alluvial fans), climatology (humidity and pressure), cartography (basic mapping), global positioning systems (GPS), topography (mapping and elevations), and compass reading, as well as human geographic concepts that incorporate interviewing, photograph interpretation, and surveys. This field class will teach you a basic knowledge of instrumentation and techniques used by geographers in the field.

Course Mechanics

This course meets twice weekly for 3 hours. Generally, the first meeting will be a lecture and includes a review of basic principles of fieldwork in geography. The second meeting is a lab and will be conducted outside where we apply those ideas and processes from lecture into the field. Regarding lab work, you should be prepared to be working mostly outside, as much of the work will be in and around campus trudging up and down Mount Sentinel and wading into Rattlesnake Creek and portions of the Clark Fork River. You will be working in groups of four or five as part of a lab team, and many times you may be working in the field outside of the scheduled field day. We will teach you the basics during the lab period, but it is up to you and your group to conduct the lab, record your findings, analyse data, and write up a lab report. Indeed, if a student is unable to participate in some or all of the fieldwork due to a disability, accommodations will be provided by the instructor in order for that student to complete the coursework (see guidelines on the Disability Services for Students (DSS) website at: http://life.umt.edu/dss/name/dsshome).

Policies and Procedures

The following policies allow me to teach without distractions, and, it will provide each student with a pleasant atmosphere for learning:
Please refrain from talking in class unless engaging in questions with the instructor or actively participating in group discussion. If you are disturbing the lecture, I may ask that you exit the classroom.

No cell phones on in class! Please make sure your cell phone is off before lecture begins.

Be on time! I expect everyone to be on time for class in order to not disturb the lecture. If for some reason you are late, I ask that you be extremely quiet and not disturb anyone as you enter and sit down.

Please do not leave the class early. If you have a special reason for leaving early please contact me before class begins and sit close to the door in order to exit quietly.

No reading of any material during class is allowed. Please pay attention to each lecture.

**Grading**

**Weekly Assignments (100 points total)**

There will be a number of class assignments (both in-class and out-of-class) administered arbitrarily throughout the semester. These are short exercises covering topics that we discuss in class and which are part of your readings. The purpose is to ensure that each student understands the concepts being discussed, practices and improves writing skills, completes the required reading assignment and attends each lecture. **THESE ASSIGNMENTS WILL BE VERY IMPORTANT IN DETERMINING YOUR FINAL GRADE!**

**Labs/Fieldwork (300 total points):**

Besides the lectures and assignments—covering the theoretical aspects of geography—the laboratories or fieldwork encompasses the practical or applied side of the discipline. Each lab is designed to cover an aspect of a subdiscipline within geography and requires a plan, procedure, analysis, and write-up. The labs will be assigned during the first class meeting of each week, and then the actual fieldwork will consist of a demonstration and perhaps the completion of the lab during the second class meeting of the week. The labs and fieldwork form the crux of this course, and therefore constitute a major part of your final grade.

**Examinations (200 points total):**

Each examination, including the final, is subjective, not comprehensive. This means that each exam will encompass only the material I cover in lectures between exams. In general, each examination will be a combination of multiple choice, matching, and short and long essays. There will be a total of two examinations throughout the semester.

The rules for the examinations are as follows:

1. You will take each exam as scheduled. Make-up exams are not allowed—except as listed in the Make-up exam policy below.
2. **Make-up Exam Policy:**
   - All Students must take the final exam as scheduled. Conflicts must be settled with the Dean. This is University Policy and there are no exceptions.
   - All Students must take each exam as scheduled. If an exam is missed, the student will receive a zero (0) on the exam.
These are the only exceptions that will warrant a make-up exam:

- University events – such as sporting or music events.
- Military obligations.
- Religious holidays.
- Serious family emergency.
- Medical emergencies or serious illness.
- Court-imposed legal obligations such as subpoenas or jury duty.
- Serious weather conditions.
- Special curricular requirements such as judging trips or field trips.

Any student requiring an exception under this policy must do so prior to the scheduled exam—unless in the case of an actual emergency (sudden hospitalization). A student must provide official documentation of the reason for absence in advance.

**Grading Breakdown:**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>100</td>
</tr>
<tr>
<td>Labs</td>
<td>300</td>
</tr>
<tr>
<td>Exams (2 x 100 points)</td>
<td>200</td>
</tr>
</tbody>
</table>

**Total Points:** 600 points

There is a total of 600 points available for the course—assignments = 100 points, labs = 300 points, Exams = 200 points = 600 points. All assignments and examinations, as well as the final grade, are based on the following scale:

A = 90 – 100%
B = 80 – 89.99%
C = 70 – 79.99%
D = 60 – 69.99%
F = 59.99% and below

Please note that in order to be fair to all students, I will not round up a grade. For example, if you receive a 79.99%, you will receive a “C” in the course.

**Additional Information**

In addition, be aware of the rules and regulations for student conduct in the Student Conduct Code at [http://life.umt.edu/vpsa/studentconduct.php](http://life.umt.edu/vpsa/studentconduct.php). Carefully review the sections on plagiarism [also consult the UM Catalog]. Cheating and plagiarism are not tolerated and will be dealt with as outlined in the Code.
Class Schedule and Readings
All course reading material, course assignments, and laboratory descriptions are available on Moodle. It is the responsibility of the student to print out these readings from Moodle.

SECTION I: INTRODUCTION

Week 1 – August 25, 27

Introduction

Emphasis: Fieldwork and methods in geographic research

Readings [Due for this week]:


Assignment #1 [Due on Wednesday September 3]: Geography and Fieldwork

Week 2 – September 1, 3

Fieldwork and Techniques

NO CLASS on Monday September 1 – LABOR DAY HOLIDAY

Emphasis: Before heading out into the field, know this…

Readings [Due for this week]:


Assignment #2 [Due on Monday September 8]: Fieldwork
SECTION II: QUANTITATIVE FIELDWORK

Week 3 – September 8, 10

Emphasis: Basics of the pocket transit (compass) and conducting a traverse

Readings [Due for this week]:

Bruntion Pocket Transits. Denver: Wm. Ainsworth and Sons, Inc. [Instruction booklet].


Lab #1 [Due on Wednesday September 17]: Azimuths, distances, and traverse

Week 4 – September 15, 17

Global Positioning Systems

Emphasis: High-Tech Location

Reading [Due for this week]:


Assignment #3 and #4 [Due on Monday September 22]: How Does GPS Work?

Lab # 2 [Due on Wednesday September 24]: GPS and Triangulation

Week 5 – September 22, 24

Topography and Mapping

Emphasis: Basic mapping techniques

Readings [due for this week]:


Assignment #5 [Due on Monday September 29]: Basic Mapping

Lab # 3 [Due on Wednesday October 1]: Land Surveying/Elevations and Mapping
**Week 6 — September 29, October 1**

**Geomorphology**

**Emphasis:** Landforms/Slides/Fans

**Reading [due for this week]:**


**Assignment #6 [Due on Monday October 6]: Geomorphologic Structures**

**Lab # 4 [Due on Wednesday October 8]: Slides and/or Fans**

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**Week 7 — October 6, 8**

**Hydrology**

**Emphasis:** Determining Drainage Areas and Discharge

**Reading [due for this week]:**


**Assignment #7 [Due on Monday October 13]: Drainage and Discharge**

**Lab # 5 [Due on Wednesday October 15]: Drainage Areas and Streamflow**
Week 8 – October 13, 15  

**Emphasis:** Basics of Climatology

**Reading(s):**


**Lab # 6** [Due on Wednesday October 22]: Humidity, Barometric Pressure and Mapping

Week 9 – October 20, 22  

**Mid-Term Week**

**Midterm Examination on Wednesday October 22, 2014**

**SECTION II: QUALITATIVE FIELDWORK**

Week 10 – October 27, 29  

**Qualitative Fieldwork**

**Emphasis:** Defining Qualitative Research

**Reading [due for this week]:**


**Assignment #8** [Due on Monday November 3]: What is qualitative research?

Week 11 – November 3, 5  

**Ethics**

**Emphasis:** Ethics in geographic fieldwork

**Readings [due for this week]:**


Online Ethics Course and the IRB http://phrp.nihtraining.com/users/login.php; http://www.umt.edu/research/complianceinfo/irb/

**Assignment #9**[Due on Wednesday November 12]: Online Ethics Course/Ethics in Fieldwork

**Week 12 – November 10, 12**

**Surveys**

**Emphasis:** Surveys and questionnaires.

**Readings [due for this week]:**


**Lab # 7**[Due on Monday November 24]: Campus Social Survey

**Week 13 – November 17, 19**

**Interviews**

**Emphasis:** Interviewing

**Reading(s):**


**Week 14 – November 24, 26**

**Transcribing/Coding**

**NO CLASS on Wednesday November 26 – THANKSGIVING HOLIDAY**

**Emphasis:** Transcribing and Coding Qualitative Data

**Readings [due for this week]:**

Assignment #10 [Due on Wednesday December 3]: Coding Qualitative Data

Lab # 8 [Due on Wednesday December 3]: Interview and Data Collection

Week 15 – December 1, 3 Final Class Review

Week 16 Finals Week

FINAL EXAM: MONDAY DECEMBER 8, 8AM