The University of Montana Department of Geography

GPHY 385- Field Techniques  
Fall Semester 2015

Monday’s 12:10 to 1PM and Wednesday’s 12:10 – 2:00 PM  
Room 303, SG (Schreiber Gym)

Instructor: Tom Sullivan  
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Email: thomas.sullivan@msou.mt.edu  
Office Hours: 2:30 to 5PM on Wednesdays; NOON to 1PM on Fridays; or by appointment

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Office Hours: 2:00 to 4PM on Wednesdays

Course Description

This course is intended to give you practical experience for use in designing and implementing research in geography. We will emphasize a variety of methods used by geographers in the field from that includes both qualitative and quantitative methods by covering a number of sub-disciplines. 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 may include physical and spatial geographic work such as geomorphology, climatology, cartography (basic mapping), global positioning systems (GPS), and topography (mapping and elevations), as well as human-geographic concepts that incorporate interviewing, observation, social surveys, and coding. This field class will also teach you a basic knowledge of instrumentation and techniques used by geographers in the field.

Course Mechanics

This course meets twice weekly, once for a lecture, discussion, and lab overview, and again for conducting the laboratory. For the field work or laboratory portion, 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 or wading into Rattlesnake Creek. You will be working in groups of three, four, or five as part of a team, and on some occasions you may be working in the field outside of the scheduled field work time or perhaps on a different 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, analyze the data, and write up the lab report. Indeed, if a student is unable to participate in some or all of the field work 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

Writing Assignments (50 points total)

There will a number of writing assignments administered 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 insure that each student understands the concepts being discussed, practices and improves writing skills, completes the required reading assignment and attends each lecture.

Discussion (25 points total)

On some weeks, you will be asked to contribute to the lecture through the readings or an exercise with other students. You cannot receive discussion points if you aren't in class! The topics are assigned the previous lecture.

Labs/Fieldwork (175 total points):

Besides the assignments—covering many theoretical aspects of fieldwork in geography—the laboratories or fieldwork encompass 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 (100 points total):

Each examination (midterm and 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 is online and will be a combination of multiple choice, matching, and perhaps it will have short essays. There will be a total of two examinations.
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>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>50</td>
</tr>
<tr>
<td>Discussion Points</td>
<td>25</td>
</tr>
<tr>
<td>Labs</td>
<td>175</td>
</tr>
<tr>
<td>Exams (2 x 50 points)</td>
<td>100</td>
</tr>
</tbody>
</table>

**Total Points:** 350 points

There is a total of 350 points available for the course—assignments = 50 points, discussion= 25, labs = 175 points, Exams = 100 points = 350 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.

The course is offered as traditional “T” letter grade only.
Additional Information

1. Please consult the Class Schedule for relevant dates.

2. For assistance with writing, please consult the on-line resources of the UM Writing Center in the Mansfield Library.

3. All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code (it is posted on Moodle). The Code is available for review online http://www.umt.edu/vpsa/policies/student_conduct.php. Cheating and plagiarism are not tolerated and will be dealt with as outlined in the Code.

4. The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and Disability Services for Students. If you think you may have a disability adversely affecting your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommasson Center 154 or 406.243.2243. I will work with you and Disability Services to provide an appropriate modification.

Due to the dynamic nature of scheduling and unforeseen events, the instructor reserves the right to make changes to this syllabus as needed and if necessary.

Class Schedule and Readings
All course reading material, course assignments, and laboratory descriptions are available on Moodle.

Section I: Introduction

Week 1 – August 31, September 2

Introduction

Expectations of the course; brief Introduction to geographic field techniques

Week 2 – September 7, 9

Quantitative Fieldwork/Qualitative Fieldwork

NO CLASS on Monday September 7 – Labor Day Holiday

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

Readings (for this week):


**Discussion (for this week):** Ted talks and field work, observations, and data analysis. Differences between qualitative and quantitative fieldwork?

**Assignment #1 [Due on Friday, September 18]:** Fieldwork, observation, and analysis

## Section II: Quantitative Fieldwork

### Week 3 – September 14, 16  
**Location and GPS**

**Emphasis:** Navigating with GPS

**Readings (for this week):**


**Discussion (for this week):** How has GPS changed the way we do fieldwork?

**Lab # 1 [Due on Wednesday September 23]:** GPS

### Week 4 – September 21, 23  
**Hand levels and Basic Topo**

**Mapping**

**Emphasis:** Basic mapping techniques

**Readings (for this week):**


**Discussion (for this week):** How do we go about making topographic maps?

**Assignment #2 [Due on Monday September 28]:** Using GPS and Hand levels to Construct Maps

**Lab # 2 [Due on Wednesday September 30]:** Basic mapping techniques

### Week 5 – September 28, 30  
**Measuring Landforms**

**Emphasis:** Landslides

**Readings (for this week):**

**Discussion (for this week):** What are landforms and how do we go about measuring them?

**Lab # 3 [Due on Wednesday October 7]:** Volume calculations in landslides

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**Week 6 – October 5, 7**  
**Drainage Basins**  
**Emphasis:** Determining Drainage Areas and Calculating Discharge in Streams

**Readings (for this week):**


**Discussion (for this week):** How do the size of drainage basins relate to stream discharge?

**Assignment #3 [Due on Monday October 12]:** Landforms

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**Week 7 – October 12, 14**  
**Streamflow**  
**Emphasis:** Calculating Discharge in Streams

**Readings (for this week):**


**Discussion (for this week):** What is stream discharge?

**Lab # 4 [Due on Wednesday October 21]:** Drainage basins and streamflow

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**Week 8 – October 19, 21**  
**Midterm Week**

Midterm Examination is Online on Wednesday October 21 (specifics will be given a week prior to the exam)

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**Section II: Qualitative Fieldwork**

**Week 9 – October 26, 28**  
**Qualitative Fieldwork and Research Ethics**  
**Emphasis:** Defining qualitative research and research ethics

**Readings (for this week):**

Discussion (for this week): What is ethics in qualitative research?

Assignment #4 [Due on November 2]: Online Ethics Course

Week 10 – November 2, 4
Social Surveys and Research Analysis

Emphasis: Basics of social surveys and learning NVivo

Readings (for this week):


Discussion (for this week): Developing questions for the social survey

Week 11 – November 9, 11
Social Surveys 2

NO CLASS on Wednesday, November 11 – Veterans Day Holiday

Lab # 5 [Due on Wednesday November 18]: The Social Survey

Week 12 – November 16, 18
Interviews 1

Emphasis: Interviewing

Reading (for this week):


Discussion (for this week): Developing and practicing the interview.

Assignment #5 [Due on November 23]: Surveys and Interviews
Week 13 – November 23, 25

NO CLASS on Wednesday November 25 – Thanksgiving Holiday

Lab # 6 [Due on Wednesday December 2]: The Interview

Week 14 – November 30, December 2

Qualitative Analysis 1

Emphasis: Transcribing and Coding Qualitative Data

Readings (for this week):


Discussion (for this week): How to code?

Lab # 7 [Due on Wednesday December 5]: Analysis of Qualitative Data with NVivo

Week 15 – December 7, 9

Qualitative Analysis 2

Emphasis: Coding and Analysis

Week 16

Finals Week

Final Exam: the date TBD