

**Research Methods in Geoscience – GEY 701 - Fall 2005**  
**Room TEC 104 – T 8:30 – 11:15 am**

**Instructor:** Catherine Snelson

**Office Hours:** M 4:00 – 5:00 pm; W 9:30- 10:30 am; or by appointment

**Office:** LFG 204

**Office Phone:** 895-2916

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**Text:** Graduate Research, A guide for Students in the Sciences by Robert V. Smith

Electronically Speaking: A Presenter's Guide to Communication Figuratively, CDROM

The Elements of Style by William Strunk Jr. and E. B. White

**Additional Reference Text:** Writing a Thesis, Substance and Style by R. Keith Van Wagenen  
Students Must Write by Robert Barrass

**Purpose of this Course**

This course is designed to introduce graduate students to the processes of scientific research and the design of research projects as applied to modern geoscience. The course will focus on designing and conducting field and laboratory based studies, scientific writing skills, public presentation, and professional ethics. Two field trips will familiarize you with local and regional geology. All students should take time during the early part of the semester to visit department faculty and learn about their research. The goal of these visits is to familiarize you with the type of research that is conducted in the Geoscience department. In addition, for those of you without a graduate advisor, this is a time to choose an advisor and select a thesis/dissertation topic.

**Course Objectives** – to acquire an understanding of the following:

1. UNLV and Geoscience graduate student guidelines
2. Conducting literature searches
3. Identifying research problems
4. Designing research projects
5. Writing proposals to obtain research funding
6. How to conduct scientific research
7. Communicating your research conclusions
8. Oral presentation skills
9. Ethical scientific behavior

**Grading:**

Homework assignments: 10%

Research problem presentation: 10%

Research problem paper: 10%

Thesis Proposal: 20%

Thesis proposal presentation/abstract: 15/5%

Grant proposal: 15%

Class participation: 15%

This syllabus is subject to change.

**Succeeding!**

To do well in this class you should study and work with the material daily. At the end of each day, read your notes and make sure that you understand what you wrote. Better yet, re-write your notes in a second notebook using complete sentences: if something isn't clear in your own mind it will be readily apparent to you. You should do this no later than 24 hours after class. Even though they are not assigned, write out answers to the questions at the end of each chapter. If you develop a study group, you will learn more and the experience will be more enjoyable. Keep up with reading assignments and lecture material. It is harder to come from behind than to stay engaged daily. If you get confused or have questions that have not been resolved in lecture, then do not hesitate to contact me. If you cannot make any of the office hours, call or email for an appointment.

## **Logistics and Policies**

### **1. Participation:**

You are expected to be an active participant in the course and much class activity will involve group discussions. Throughout the semester we will have various guest speakers who will expect questions and discussion from you as an audience.

### **2. Attendance**

Class and field trip attendance is required. In addition, you are expected to attend the weekly Departmental Seminar series, which is held every Wednesday from 4:00 to 5:00 pm.

### **3. Cheating, Plagiarism, and Academic Dishonesty**

You are required to be familiar with university policies and procedures in the current UNLV Undergraduate Catalog. Importantly, we follow the policies on Cheating, Plagiarism, and Academic Dishonesty that are stated in the most recent UNLV Undergraduate Catalog. In the hopes of deterring incidents of cheating and/or plagiarism this class employs a "**zero tolerance**" policy meaning that if a student commits cheating or plagiarism they receive a grade of F for the class.

### **4. Copyright Issues**

The University requires all members of the University Community to familiarize themselves and to follow copyright and fair use requirements. **YOU ARE INDIVIDUALLY AND SOLELY RESPONSIBLE FOR VIOLATIONS OF COPYRIGHT AND FAIR USE LAWS. THE UNIVERSITY WILL NEITHER PROTECT YOU NOR DEFEND YOU NOR ASSUME RESPONSIBILITY FOR EMPLOYEE OR STUDENT VIOLATIONS AND FAIR USE LAWS.** Violations of copyright laws could subject you to federal and state civil penalties and criminal liability as well as disciplinary action under University policies. To familiarize yourself with copyright and fair use policies, the University encourages you to visit its copyright web page at: <http://www.unlv.edu/committees/copyright>.

### **5. Disability Services (DS)**

The UNLV Disability Resource Center (DRC) houses the resources for students with disabilities. If you have a documented disability that may require accommodations, you will need to contact the DRC for the coordination of services. The DRC is located in the Student Services Complex (SSC), Room 137. Their numbers are: (702) 895-0866/Voice; (702) 895-0652/TDD; and (702) 895-0651/Fax. For additional information please visit <http://www.unlv.edu/studentlife/drc>.

### **6. Writing Center**

Students are welcome to use the UNLV Writing Center free of charge. Consultants can assist students at all stages of the writing process. Students may make appointments by calling the center (895-3908) or in person at FDH-240. The center can be particularly helpful when you are writing or rewriting your lab field reports.

### **7. Religious Holidays**

As a general rule, a student missing a class or laboratory assignment because of observance of a religious holiday shall have the opportunity to make up missed work. You must notify me by the last day of late registration to be assured of this opportunity. If this pertains to you, a clear deadline will be set for completion of work.

**8. Nondiscrimination** - The University of Nevada Las Vegas does not discriminate on the basis of race, color, creed, religion, national or ethnic origin, gender, age, sexual orientation, disability, or veteran status.

### **9. Official Extracurricular Activity**

All students who represent UNLV at an official extracurricular activity shall have the opportunity to make up assignments, but you must provide official written notification to me no less than one week prior to the missed class(es).

### **10. Learning Environment**

The classroom is intended to be a place of learning. As such and as specified in the UNLV Undergraduate and Graduate Catalogs, no pagers, cell phones, or other potentially disruptive devices are allowed in either lecture or the laboratory.

**Revised as of 10/31/05**

**CLASS SCHEDULE**

<b>Wk</b>	<b>Date</b>	<b>Lecture/ Lab Topic</b>	<b>Speaker</b>	<b>Reading &amp; Writing Assgn.</b>
1	Aug. 30	Introduction: What is a graduate student; Selecting an advisor and research topic	Cathy Snelson	Smith, ch. 1 - 3
2	Sept. 6	Time management; Plagiarism	Cathy Snelson	Smith, ch. 4; Bring Grad Student Catalog; <b>Research Paragraph</b>
3	Sept. 13	Information searches on the internet; Library resources; Library tour	Sidney Watson	Smith, ch. 7; Strunk and White, ch. I-IV
4	Sept. 20	Scientific writing and publication; Identifying a research problem	Matt Lachniet	Smith, ch. 8; <b>Time Management Plan</b>
5	Sept. 27	Scientific presentations	Dave Kreamer	Presentation Articles; Smith, ch. 10; AAPG CDROM
6	Oct. 4	The research question; Thesis Preparation; Graduate guidelines; Slide presentation	Cathy Snelson	Smith, ch. 5, 9; Bring Grad Student Guidelines
	Oct. 8 (Sat)	<b>Field Trip – Local Geology – All Day</b>	Rod Metcalf Andrew Hanson	
7	Oct. 11	<b>Presentation of Research Problem</b>	701 Students	<b>Research Problem paper</b>
8	Oct. 18	No Class – GSA – Salt Lake, UT		
9	Oct. 25	Paper Review Exercise	Brett McLaurin	
10	Nov. 1	Permitting; Working on Public Lands	Marc Valenti	<b>Field trip synthesis (2 pg)</b>
11	Nov. 8	Research tools and methodology	Cathy Snelson	Smith, ch. 5; <b>Presentation Abstract</b>
	Nov. 12 – 13 (Sat & Sun)	<i>Weekend Field Trip – Southern NV Tectonics</i>	Cathy Snelson	Overview Paper on Southern NV Tectonics
		<i>Joint with Structural Geology</i>	Wanda Taylor	
12	Nov. 15	Grant Proposals; Components of Scientific research; Planning a Project; Project obligations; Writing/editing	Cathy Snelson	Smith, ch. 12; <b>Field Trip synthesis (2 pg)</b>
13	Nov. 22	<b>No Class – Work on Grant Proposals</b>		
14	Nov. 29	Ethics and professional conduct	Cathy Snelson	Smith, ch. 6; <b>Ethics Exercise; Grant Proposal</b>
15	Dec. 6	<b>No Class – Work on Proposals</b>		
16	Dec. 15	<b>Thesis Proposal Presentation 8 – 10 am</b>	701 Students	<b>Thesis Proposal</b>