

GEOL497 Recent Advances in Geology

Instructor

Dr. Michael Brown
Department of Geology

Lectures

Location: PLS 1588
Time: Wednesday 8:00 - 8:50 A.M., Monday 4:00 - 6:00 P.M.,

Course description:

A survey of important recent advances in geological sciences in the context of the methods and practices of scientific research

Prerequisites:

For GEOL majors only; minimum of Senior standing and a least 2 Upper Level GEOL courses with at least a third GEOL course and GEOL393 concurrent. Restricted to students meeting eligibility requirements for Geology departmental honors. To be taken as late as possible in program.

Academic integrity:

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit <http://www.shc.umd.edu>.

To further exhibit your commitment to academic integrity, remember to sign the Honor Pledge on all examinations and assignments: "*I pledge on my honor that I have not given or received any unauthorized assistance on this examination (assignment).*"

Format and Requirements:

1. The class will meet two times per week, for twelve weeks of the semester (NB. The class runs on a Wednesday to the following Monday cycle for each topic).
2. Attendance is expected at a minimum of seven of the eight spring semester department seminars, held on Fridays at 11:00–12:15 p.m. (PLS 1140; February 5, 12, 19, March 12, 26, April 2, 9, 16)—see: <http://www.geol.umd.edu/pages/EventsNews/seminar.htm>

3. Attendance is expected at a minimum of four of the six semester-time spring meetings of the Geological Society of Washington (GSW, directions below; January 27, February 10, March 10, 24, April 14, 18)—see: <http://www.gswweb.org/>
4. Assigned reading may consist of published articles, chapters in books, references supplied by the instructor, handouts or web-based information; normally assigned reading will be notified by email.
5. Students will maintain a journal of two-page (minimum – a guide only) outlines/notes and literature abstracts for each week's topic, and notes from departmental seminars and GSW meetings.
6. Evaluation will be based on class participation and the completed journal (journal to be handed in to Dr. Michael Brown (CSS 3253) before Wednesday May 5th, 2010, 12 noon). Participation in class sessions is essential for satisfactory completion of the course.

Only students with written, excused absences are entitled to make-up any written or oral presentation and that should be at a time convenient for the instructor and student. University Policy provides several cases for which student absence is excused (www.testudo.umd.edu/soc/atedasse.html). Note that the student must request to be excused in writing and supply appropriate documentation.

If the campus is closed for any reason during a scheduled activity, the material of that day will be rescheduled.

Special needs

I will make every possible effort to accommodate your request for special accommodations, when justified. However, any requests must be submitted as soon as possible but no later than the end of the schedule adjustment period. *Do not wait!*

Students with disabilities

If you have a documented disability, you should contact Disability Support Services 0126 Shoemaker Hall. Each semester students with documented disabilities should apply to DSS for accommodation request forms, which you can provide to your professors as proof of your eligibility for accommodations. The rules for eligibility and the types of accommodations a student may request can be reviewed on the DSS web site. If you have a disability documented by DSS that may affect your work in Geology 489H, you should discuss this with Dr. Brown by the second week of class.

Religious observances

The University System of Maryland policy provides that students should not be penalized because of observances of their religious beliefs, students shall be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances. *It is the responsibility of the student to inform the instructor of any intended absences for religious observances in advance.*

Course evaluation

CourseEvalUM will be open for students to complete their evaluations for Spring 2009 courses between Tuesday, April 28, and Sunday, May 10. Students can go directly to the "<http://www.courseevalum.umd.edu>" website to complete their evaluations, beginning April 28. You will be alerted about these dates and provided more information closer to that time, and students will be alerted via their official university e-mail account.

Students who complete evaluations for all of their courses in the previous semester (excluding summer), can access the posted results via Testudo's CourseEvalUM, reporting link for any course on campus that has at least a 70% response rate. You can find more information, including periodic updates, at the "https://www.irpa.umd.edu/Assessment/CourseEval/fac_faq.shtml" course evaluation website.

The expectation is that all students will complete these. This is YOUR chance to anonymously evaluate this class: please use this opportunity!

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SCHEDULE

Week 1

1/25 No class

(1/25-1/29) 1/27 No class

1/27 GSW

Week 2

2/1 No class

(2/1-2/5) 2/3 8.00 am PLS 1158

Dr Brown: Introduction to the class and the scientific method

2/5 Geology Seminar

Week 3

2/8 4.00 pm PLS 1158

Dr Brown: The scientific method

(2/8-2/12) 2/10 8.00 am PLS 1158

Dr Brown: Peer review

2/10 GSW

2/12 Geology Seminar

Week 4

2/15 4.00 pm PLS 1158

Dr Brown: Peer review

(2/15-2/19) 2/17 8.00 am PLS 1158

Dr Brown: Observation, illusion, uncertainty, interpretation, cognitive bias and models in geology

2/19 Geology Seminar

Week 5

2/22 4.00 pm PLS 1158

Dr Brown: Observation, illusion, uncertainty, interpretation, cognitive bias and models in geology

(2/22-2/26) 2/24 8.00 am PLS 1158

Dr Penniston-Dorland: Fluids around cooling plutons

2/26 393/394 presentations

Week 6 3/1 4.00 pm PLS 1158
Dr Penniston-Dorland: Fluids around cooling plutons

(3/1-3/5) 3/3 8.00 am PLS 1158
Dr Penniston-Dorland: Subduction zone fluids

3/5 Geology Seminar

Week 7 3/8 4.00 pm PLS 1158
Dr Penniston-Dorland: Subduction zone fluids

(3/8-3/12) 3/10 8.00 am PLS 1158
Dr Penniston-Dorland: Fluids in orogenic belts

3/10 GSW

Week of Mar. 15-19 Spring Break

Week 8
3/22 4.00 pm PLS 1158
Dr Penniston-Dorland: Fluids in orogenic belts

(3/22-3/26) 3/24 8.00 am PLS 1158
Dr Campbell: Phase transitions in mantle minerals

3/24 GSW

3/26 Geology Seminar

Week 9
3/29 4.00 pm PLS 1162
Dr Campbell: Phase transitions in mantle minerals

(3/29-4/2) 3/31 8.00 am PLS 1158
Dr Campbell: Core formation

4/2 Geology Seminar

Week 10
4/5 4.00 pm PLS 1158
Dr Campbell: Core formation

(4/5-4/9) 4/7 8.00 am PLS 1158
Dr Farquhar: Evolution of Earth's early atmosphere

4/9 Geology Seminar

Week 11

4/11 4.00 pm PLS 1158

Dr Farquhar: Evolution of Earth's early atmosphere

(4/11-4/16) 4/14 8.00 am PLS 1158

Dr Farquhar: Evolution of Earth's early oceans

4/14 GSW

4/16 Geology Seminar

Week 12 4/19 4.00 pm PLS 1158

Dr Farquhar: Evolution of Earth's early oceans

(4/19-4/23) 4/21 8.00 am PLS 1158

Dr Brown: Geodynamics of modern Earth

Week 13 4/26 4.00 pm PLS 1158

Dr Brown: Geodynamics of modern Earth

(4/26-4/30) 4/28 8.00 am PLS 1158

Dr Brown: Secular change in geodynamics

4/28 GSW

Week 14 5/3 4.00 pm PLS 1158

Dr Brown: Secular change in geodynamics

(5/3-5/7) 5/5 No class

WEDNESDAY MAY 5th, NOON DEADLINE TO HAND IN JOURNAL