**EAS 210 - ENGINEERING EARTH SCIENCE**

**FALL TERM 2008 - General Information**

**Instructor** Dr. Clark, Room 1-01B ESB, Ph. 492-3266
e-mail: fred.clark@ualberta.ca

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|---|---|---|---|---|
| **Lectures** | A1 | M W F | 1100 - 1150 | TL B-1 |
| **Laboratories** | D01 | M | 1400 - 1650 | T 3-76 |
| | D02 | T | 0800 - 1050 | T 3-76 |
| | D03 | T | 1400 - 1650 | T 3-76 |
| | D04 | T | 1830 - 2120 | T 3-76 |
| | D05 | W | 1400 - 1650 | T 3-76 |
| | D06 | W | 1830 - 2120 | T 3-76 |
| | D07 | R | 0800 - 1050 | T 3-76 |
| | D08 | R | 1400 - 1650 | T 3-76 |
| | | ***NOTE: Section D08 restricted to Mining and Petroleum Engineering Students*** | | |
| | D09 | R | 1830 - 2120 | T 3-76 |
| | D10 | F | 1400 - 1650 | T 3-76 |

**Marks**

30% Laboratory work
10% Laboratory exam on rocks and minerals
10% Laboratory exam on maps and air photos
15% Mid-term exam on lecture material, through & including soils
**Wednesday, Oct. 15, IN CLASS**
35% Final exam on lecture material, cumulative, emphasis on last half
**Thursday, Dec. 11, 0900-1100**

*** Deferred final exam scheduled for Saturday, Jan. 10, 2009, 1000-1200 ***

**Materials**

Course notes (partial): http://courses.eas.ualberta.ca/eas210

Required: "EAS 210 Laboratory Manual", 2008 Edition.

Simple lab kit (magnet, clear glass plate with smooth or taped edges, 10X magnifier, penny).

Recommended: "Earth: An Introduction to Physical Geology". 2nd Canadian Edition", by Tarbuck, Lutgens, Tsujita and Hicock; to follow/amplify lecture material.

Helpful: "Audubon Society Field Guide to North American Rocks and Minerals" OR "Simon and Schuster's Guide to Rocks and Minerals", for first five labs.

Reference Web Site: http://faculty.eas.ualberta.ca/drclarkrocks

**SCHEDULE OF LABORATORIES - FALL 2008**

Labs fall on the Thanksgiving, Remembrance Day, and Fall Term Class Break holidays, and two of those are Mondays. I cover most subjects in class before you deal with them in labs, so the schedule of labs is somewhat complicated. **Students registered in the Monday section, D01, should note that you will do Lab 5 on Saturday, Oct. 18 (or may arrange to attend an evening section that week only)! Labs are in Tory Room 3-76.**

| | | | |
|---|---|---|---|
| **Week #1** | | | |
| Sept. | **3-5** | **No Labs.** | |
| **Week #2** | | | |
| Sept. | **8-12** | **No labs.** | |
| **Week #3** | | | |
| Sept. | 15 | Lab 1 | Characteristic Properties of Minerals. |
| | 16 | Lab 1 | |
| | 17 | Lab 1 | |
| | 18 | Lab 1 | |
| | 19 | Lab 1 | |
| **Week #4** | | | |
| Sept. | 22 | Lab 2 | Igneous Rocks. |
| | 23 | Lab 2 | |
| | 24 | Lab 2 | |
| | 25 | Lab 2 | |
| | 26 | Lab 2 | |
| **Week #5** | | | |
| Sept. | 29 | Lab 3 | Sedimentary Rocks. |
| | 30 | Lab 3 | |
| Oct. | 1 | Lab 3 | |
| | 2 | Lab 3 | |
| | 3 | Lab 3 | |
| **Week #6** | | | |
| Oct. | 6 | Lab 4 | Metamorphic Rocks. |
| | 7 | Lab 4 | |
| | 8 | Lab 4 | |
| | 9 | Lab 4 | |
| | 10 | Lab 4 | |
| **Week #7** | | | |
| Oct. | **13** | **Thanksgiving holiday; no lab. See also SATURDAY, OCTOBER 18!** | |
| | 14 | Lab 5 | Economic Mineralogy; Review. |
| | 15 | Lab 5 | |
| | 16 | Lab 5 | |
| | 17 | Lab 5 | |
| ***SAT.*** | **18** | **Lab 5** | **Economic Mineralogy; Review. For Section D01, MONDAY students!** |

**Week #8**

| | | | |
|---|---|---|---|
| Oct. | **20** | **Mid-term lab Exam.** | |
| | **21** | **Mid-term lab Exam.** | |
| | **22** | **Mid-term lab Exam.** | |
| | **23** | **Mid-term lab Exam.** | |
| | **24** | **Mid-term lab Exam.** | |

**Week #9**

| | | | |
|---|---|---|---|
| Oct. | 27 | Lab 6 | The Shape of the Land Surface. |
| | 28 | Lab 6 | |
| | 29 | Lab 6 | |
| | 30 | Lab 6 | |
| | 31 | Lab 6 | |

**Week #10**

| | | | |
|---|---|---|---|
| Nov. | 3 | Lab 7 | Erosion, Deposition by Gravity and Ice. |
| | 4 | Lab 7 | |
| | 5 | Lab 7 | |
| | 6 | Lab 7 | |
| | 7 | Lab 7 | |

**Week #11**

| | | | |
|---|---|---|---|
| Nov. | **10** | **Fall Term Class Break; no lab.** | |
| | **11** | **Remembrance Day Holiday; no lab.** | |
| | 12 | Lab 8 | Geological Maps. |
| | 13 | Lab 8 | |
| | 14 | Lab 8 | |

**Week #12**

| | | | |
|---|---|---|---|
| Nov. | 17 | Lab 8 | |
| | 18 | Lab 8 | |
| | 19 | Lab 9 | The Record in the Rocks. |
| | 20 | Lab 9 | |
| | 21 | Lab 9 | |

**Week #13**

| | | | |
|---|---|---|---|
| Nov. | 24 | Lab 9 | |
| | 25 | Lab 9 | |
| | **26** | **Lab Final Exam.** | |
| | **27** | **Lab Final Exam.** | |
| | **28** | **Lab Final Exam.** | |

**Week #14**

| | | | |
|---|---|---|---|
| Dec. | **1** | **Lab Final Exam.** | |
| | **2** | **Lab Final Exam.** | |
| | **3** | **No Lab; last day of Fall Term classes.** | |
| | 4 | Ticker tape or cryin’ the blues! | |

**LAB ISSUES:** The Lab Coordinator is Dave Chesterman, phone 492-8494 and e-mail david.chesterman@ualberta.ca. He is familiar with all aspects of the lab, and you should deal with him **first** as far as any issues are concerned.

Grading Criteria: Grades will be assigned neither with predetermined absolute numerical cut-offs, nor with slavish adherence to a curve or so-called historical distribution. The historical distribution is used only as a rough guide to what the distribution of marks could look like, but an exceptionally talented class that performs well will be rewarded with higher grades than "normal"; conversely, an underachieving class will not be propped up by the curve, but will bear the consequences. In addition, courses with a lab component typically have the marks clump together, and at a relatively high total that is not truly indicative of the students' grasp of the material. **You should be aware, therefore, that a total score of 50% or more in the course as a whole will not ensure a passing grade.** If said score exceeds 50% only by virtue of the lab component, whereas lecture exam results indicate inability to master the course content to any significant degree, the student may still be assigned a failing grade. I would suggest this **may** occur for anyone whose final exam score is less than 40%, or such other circumstances as may suggest that a passing grade is inappropriate.

Class Attendance: Attendance is optional, in the sense that it does not directly constitute part of your grade. **However**, experience shows that your grasp of the material and performance on exams will relate directly to your diligence in attending class; people who skip simply don't do as well. This is your choice to make - you are adults. Choose wisely!

Access To Instructor: Anytime you can find me in my office with the door open. I do not keep set office hours, so feel free to drop by. If you wish to ensure that I will be there, arrange a meeting ahead of time, either by phone or e-mail.

Course Objectives and General Content: To introduce you to the fundamentals of geology, emphasizing the topics indicated by the laboratory schedule.

Necessary Statements: Policy about course outlines can be found in Section 23.4(2) of the University Calendar. The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Code of Student Behaviour (online at "the usual.ca/secretariat/appeals.htm") and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.