

UNIVERSITY OF CALGARY
DEPARTMENT OF GEOSCIENCE
COURSE OUTLINE

1. Course: GEOLOGY 441 – FIELD TECHNIQUES IN HYDROGEOLOGY

Laboratory Section: B01 April 30-May 16, 2014

WINTER 2014

Instructor(s): Dr. M. Hayashi ES 278 220-2794 hayashi@ucalgary.ca

Geoscience Department ES 118; (403) 220-5841; geoscience.ucalgary.ca

2. PREREQUISITE(S): Geology 401 and consent of the Department

ANTIREQUISITE: Credit for both Geology 441 and 639 will not be allowed.

NOTE: This course has limited enrolment and priority will be given to Applied and Environmental Geology majors. Students will be required to cover food and accommodation costs, and to pay a surcharge to cover the costs of equipment and other resources.

See section 3.5.C in the Faculty of Science section of the online Calendar (<http://www.ucalgary.ca/pubs/calendar/current/sc-3-5.html>)

3. **GRADING:** The University policy on grading and related matters is described in “Academic Regulations, sections F.1 and F.2” of the online University Calendar (<http://www.ucalgary.ca/pubs/calendar/current/f-1.html> and <http://www.ucalgary.ca/pubs/calendar/current/f-2.html>) In determining the overall grade in the course the following weights will be used:

Final report	90%
Participation	10%

Each piece of work (assignment, laboratory report, midterm test or final examination) submitted by the student will be assigned a percentage score. The student’s average percentage score for the various components listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

4. **Missed Components of Term Work.** The regulations of the Faculty of Science pertaining to this matter are found in the Faculty of Science area of the Calendar in section 3.6: <http://www.ucalgary.ca/pubs/calendar/current/sc-3-6.html>. It is the student's responsibility to familiarize himself/herself with these regulations. See also <http://www.ucalgary.ca/pubs/calendar/current/e-3.html>.

5. Dates and times of class exercises held outside of class hours – Mandatory safety meeting April 29 2014 17:40 – 18:40 ES 136

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY. If you have a clash with this out-of-class-time-activity, please inform your instructor as soon as possible so that alternative arrangements may be made for you.

Department Approval: ORIGINAL SIGNED Date: April 14 2014

**Associate Dean’s Approval for
out of regular class-time activity: ORIGINAL SIGNED Date: April 22 2014**

6. EXAMINATION POLICY

Students should also read the Calendar, Section G, on Examinations: <http://www.ucalgary.ca/pubs/calendar/current/g.html>.

7. In this course, the quality of the student's writing in final reports will be a factor in the evaluation of those reports. See also <http://www.ucalgary.ca/pubs/calendar/current/e-2.html>.

8. OTHER IMPORTANT INFORMATION FOR STUDENTS:

- (a) **ACADEMIC MISCONDUCT** (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under K. Student Misconduct (<http://www.ucalgary.ca/pubs/calendar/current/k.html>) to inform yourself of definitions, processes and penalties
- (b) **ASSEMBLY POINTS in case of emergency during class time. Be sure to FAMILIARIZE YOURSELF with the information at <http://www.ucalgary.ca/emergencyplan/assemblypoints>.**
- (c) **ACADEMIC ACCOMMODATION POLICY.** Students with documentable disabilities are referred to the following links: Calendar entry on students with disabilities: <http://www.ucalgary.ca/pubs/calendar/current/b-1.html>
Student Accessibility Services: www.ucalgary.ca/access
- (d) **SAFEWALK:** Campus Security will escort individuals day or night (<http://www.ucalgary.ca/security/safewalk/>). Call 220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- (e) **FREEDOM OF INFORMATION AND PRIVACY:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). As one consequence, **students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page.** For more information see also <http://www.ucalgary.ca/secretariat/privacy>.
- (f) **STUDENT UNION INFORMATION:** VP Academic **Phone:** 220-3911 **Email:** suypaca@ucalgary.ca.
SU Faculty Rep. **Phone:** 220-3913 **Email:** sciencerep@su.ucalgary.ca Website <http://www.su.ucalgary.ca/home/contact.html>.
Student Ombudsman: www.ucalgary.ca/provost/students/ombuds; ombuds@ucalgary.ca 220-6420
- (g) **INTERNET and ELECTRONIC COMMUNICATION DEVICE Information.** You can assume that in all classes that you attend, **your cell phone should be turned off.** Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.

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TERM: Winter 2014

PREREQUISITE(S): Geology 401 and consent of the Department

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LECTURER(S): Dr. M. Hayashi ES 278 220-2794 hayashi@ucalgary.ca

LABS : B01 April 30-May 16, 2014

MARK DISTRIBUTION: A. Composition of Final Grade

Final Report	90%
Participation	10%

D. Grading Scheme

A+	96 – 100%
A	90 – 95%
A-	85 – 89%
B+	80 – 84%
B	75 – 79%
B-	70 – 74%
C+	66 – 69%
C	62 – 65%
C-	58 – 61%
D+	54 – 57%
D	50 – 53%
F	<50%

TENTATIVE SCHEDULE

April 30: Travel to Richmond, BC

May 1: Lectures at UBC

May 2: Pore pressure profile measurement at Cleveland Dam, North Vancouver

May 3: Geochemical sampling and analysis of groundwater

May 4: Vadose zone hydrology (tensiometer, infiltrometer, soil moisture measurement, geophysical mapping)

May 5: Hydraulic testing of wells (slug test, pumping test)

May 6: Travel back to Calgary

May 7-13: Data analysis and tutorial sessions

May 16: Final report due