



UNIVERSITY OF CALGARY

DEPARTMENT OF GEOSCIENCE COURSE OUTLINE

1. **Course:** GLGY 575, Subsurface Methods in Petroleum Geology

Lecture Sections:

L01: TuTh, 11:00-12:15, ES 443

Dr. S. Hubbard, Office: ES 266, Ph. 403-220-6236, shubbard@ucalgary.ca, Office Hours: TBD

Geoscience Department ES 118, 403-220-5841, geoscience.ucalgary.ca, geosci@ucalgary.ca

2. **Prerequisites:** Geology 449 or Geophysics 449. See also Geology [Course Descriptions](#) of the University Calendar.

Antirequisites: Credit for more than one of Geology 575 or 599.01 will not be allowed.

Also known as: (formerly Geology 463)

3. **Grading:** The University policy on grading and related matters is described sections [F.1](#) and [F.2](#) of the online University Calendar. In determining the overall grade in the course the following weights will be used:

Class Participation	5%
Lab Exercises	60%
Midterm test	10%
Oral Presentation	15%
Final Test (in class)	10%

Each piece of work (e.g. lecture and lab exams, lab assignments, project) 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. The conversion between course percentage and letter grade is given below.

Letter Grade	Percent	Letter Grade	Percent
A	92-100	C	65-68
A-	88-91	C-	61-64
B+	84-87	D+	56-60
B	79-83	D	50-55
B-	74-78	F	0-49
C+	69-73		

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](#). It is the student's responsibility to familiarize himself/herself with these regulations. See also [Section E.6](#) of the University Calendar

5. **Course Materials:** *No text required; all other material provided by instructor*

6. **Examination Policy:** Students should read the Calendar, [Section G](#), on Examinations.

7. **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 [Section K](#). Student Misconduct 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 on [assembly points](#).

- (c) **Academic Accommodation Policy:** Students with documentable disabilities are referred to the following links: [Calendar entry on students with disabilities](#) and [Student Accessibility Services](#).
- (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: suvpaca@ucalgary.ca.
SU Faculty Rep. Phone: 220-3913 Email: sciencerep@su.ucalgary.ca; [Student Ombudsman](#)
- (g) **Internet and Electronic Device Information:** You can assume that in all classes that you attend, your cell phone should be turned off unless instructed otherwise. 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.
- (h) At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses (www.ucalgary.ca/usri). Your responses make a difference - please participate in USRI Surveys.

The following signature lines should be added to the course outline as appropriate

Department Approval: ORIGINAL SIGNED

Date: September 8 2014

Associate Dean's Approval for

Alternate final examination arrangements: ORIGINAL SIGNED

Date: September 8 2014

Tentative Class Schedule for Glgly 575 (Subsurface Methods), Fall 2014

******Subject to some modification******

Week	Date	Topic	Lab
1	Tu - Sept. 9	Lecture 1: Course Outline and Introduction	Western Canada Grid System
	Th – Sept. 11	Lecture 2: In class exercise	
2	Tu – Sept. 16	Lecture 3: History of Canadian Petroleum Geology; WCSB Overview; The Petroleum System	Contouring and Cross-Sections 1
	Th – Sept. 18	Lecture 4: Visualizing the Subsurface: Contour Mapping	
3	Tu – Sept. 23	Lecture 5: The Role of the Geologist: Drilling, etc.	Contouring and Cross-Sections 2
	Th – Sept. 25	Lecture 6: Tectonostratigraphy of the WCSB	
4	Tu – Sept. 29	Lecture 7: Map types, type logs, etc. Exploration: Maps, cores, correlations	Athabasca Oil Sands Core Exercise
	Th – Oct. 2	Lecture 8: Tools of the industry and scales of investigation	
5	Tu – Oct. 7	Lecture 9: Stratigraphic Concepts: Theory and Application 1	Trend, sand and pay recognition (PT. 1)
	Th – Oct. 9	Lecture 10: Stratigraphic Concepts: Theory and Application 2	
6	Tu – Oct. 14	NO LECTURE	NO LAB PERIOD (material given in lecture)
	Th – Oct. 16	Lecture 11: Sedimentologic Concepts: CRITICAL FOR LAB (PT. 2)	
7	Tu – Oct. 21	Midterm Exam	Trend, sand and pay recognition (PT. 3)
	Th – Oct. 23	Exam Review/Case Study: Oil Sands	
8	Tu – Oct. 28	Presentation Tips, Expectations and Overview	GeoScout 101
	Th – Oct. 30	Subsurface Modeling 1	
9	Tu – Nov. 4	Subsurface Modeling 2	Land Sale Property Assessment #1
	Th – Nov. 6	Hot Topic Discussion/Geologists Survey	
10	Tu – Nov. 11	Reading Days (NO CLASS)	Reading Days (NO LAB)
	Th – Nov. 13	Land Sale Property Assessment #2	
11	Tu – Nov. 18	TBD	Land Sale Property Assessment #3
	Th – Nov. 20	Presentations 1	

12	Tu – Nov. 25	Presentations 2	Fluid/reservoir mapping #1
	Th – Nov. 27	Presentations 3	
13	Tu – Dec. 2	Presentations 4	Fluid/reservoir mapping #2
	Th – Dec. 4	Final Exam	