UNIVERSITY OF CALGARY DEPARTMENT OF GEOSCIENCE COURSE OUTLINE

1. Course: GEOLOGY 561/699.34 – SEQUENCE STRATIGRAPHY

Lecture Section: L01 TR 09:30-10:45 SA 129 WINTER 2014

Instructor(s): Dr. P.K. Pedersen ES 240 220-8454 pkpeders@ucalgary.ca

D2L will be used for course communication and posting of course material

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

2. PREREQUISITE(S): Geology 453 or 441, and 461

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-2.html) In determining the overall grade in the course the following weights will be used:

Participation 10% Lab Exercises 10%

Midterm Exam 25% February 25, 2014

Presentation 20%

Final exam 35% (To be scheduled by the Registrar)

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. None

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: January 08 2014

6. EXAMINATION POLICY: No electronic or written aids (eg. cell phones, tablets, computers, PDAs, notes, textbooks) will be allowed during writing of any exams.

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 laboratory 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: suvpaca@ucagary.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.

UNIVERSITY OF CALGARY DEPARTMENT OF GEOSCIENCE COURSE OUTLINE

GEOLOGY 561 SEQUENCE STRATIGRAPHY

TERM: Winter 2014

PREREQUISITE(S): Geology 453 or 441, and 461

LECTURER(S): Dr. P.K. Pedersen ES 240 220-8454 pkpeders@ucalgary.ca

LECTURE: L01 TR 09:30-10:45 SA 129

LAB(S): B01, 02 R 11:00, 14:00, 17:00 EEEL 151

Textbook: "Siliciclastic Sequence Stratigraphy - Concepts and Applications" by H.W. Posamentier and G.P. Allen, 2000; SEPM Concepts in Sedimentology and Paleontology Series 7, Society for Sedimentary Geology, 204 pages

Textbook is available as a CD in the university bookstore.

MARK DISTRIBUTION: A. <u>Composition of Final Grade</u>

Participation 10% Lab Exercises 10%

Midterm Exam 25% February 25, 2014

Presentation 20%

Final exam 35% (To be scheduled by the Registrar)

Students who are absent from the midterm exam or final laboratory exam because of illness or other unforeseen circumstances may be granted an excused absence by the Course Coordinator (midterm exam) or Lab Coordinator (final laboratory exam) upon presentation of adequate documentation (a completed Physician/Counsellor Report form http://www.ucalgary.ca/registrar/PDFs/physcoun.pdf for illness; equivalent documentation for other circumstances). There will be no "make-up" examinations for excused absences. The weight assigned to the midterm examination will be transferred to the final examination.

Similarly, students who are unable to submit laboratory reports or assignments on time because of similar circumstances will be required to submit the same type of documentation to the Lab Coordinator in order to be considered for a time extension.

B. Final Exam

There will be a final examination scheduled by the Registrar's Office.

C. <u>Components of Course for Which a Passing Grade is Essential</u>

D

Students must achieve a passing grade (minimum of D) on both the lecture portion of the course (average of the midterm and final exams) and the laboratory portion of the course to qualify for a passing grade overall.

F

0-49

D.	Grading Scheme				
A+	96-100	A	90-95	A-	85-89
B+	80-84	В	74-79	В-	70-73
C+	66-69	C	61-65	C-	56-60

50-52

TENTATIVE LECTURE SCHEDULE AND LAB SCHEDULE.

D+

53-55

GLGY 56	1/699.34 L	_ectu	e and Lab Schedule		Winter 2014		
	Date		Lecture		Lab		
Thursday	9-Jan	1	intro to class		no lab		
Tuesday	14-Jan	2	Intro to sequence stratigraphy				
Thursday	16-Jan	3	Intro to sequence stratigraphy model	1	Seismic sequence exercise #1		
Tuesday	21-Jan	4	Seismic sequence stratigraphy				
Thursday	23-Jan	5	Accommodation Space	2	Seismic sequence exercise #2		
Tuesday	28-Jan	6	Stratal Architecture				
Thursday	30-Jan	7	Parasequences	3	Sequence model exercise		
Tuesday	4-Feb	8	Wheeler Diagrams & FSST				
Thursday	6-Feb	9	SB and Lowstand Systems Tract	4	Sequence model continued - Wheeler diagram exercise		
Tuesday	11-Feb	10	Incised Valleys 1				
Thursday	13-Feb	11	Incised Valleys 2	5	Viking - Jensen Pool exercise		
Tuesday	18-Feb		Reading Week				
Thursday	20-Feb		Reading Week				
Tuesday	25-Feb		midterm				
Thursday	27-Feb	12	TST, Transgressive erosion	6	Cardium Exercise		
Tuesday	4-Mar		3 presentations				
Thursday	6-Mar	13	Sedimentary basins and sediment supply	7	Doig Exercise		
Tuesday	11-Mar		3 presentations		_		
Thursday	13-Mar	14	Comparisons of models	8	Grand Rapids exercise		
Tuesday	18-Mar		3 presentations				
Thursday	20-Mar	15	Fluvial Sequence stratigraphy 1	9	Belly River exercise		
Tuesday	25-Mar		3 presentations				
Thursday	27-Mar	16	Fluvial Sequence stratigraphy 2	10	Colorado shale exercise		
Tuesday	1-Apr		3 presentations				
Thursday	3-Apr	17	Shale sequence stratigraphy	11	Slave Point exercise		
Tuesday	8-Apr		3 presentations				
Thursday	10-Apr	18	Course review - Questions	12	review of exercises		