

UNIVERSITY OF CALGARY
DEPARTMENT OF GEOSCIENCE
COURSE OUTLINE (January 07 2014 version)

1. Course: GEOLOGY 595.05 – BASIN ANALYSIS

Lecture Section: L01 MWF 09:00-09:50 KNB 131 WINTER 2014

Instructor(s): Dr. B. Beauchamp ES 146 220-8266 bbeauch@ucalgary.ca

Course name: Basin Analysis

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

2. PREREQUISITE(S): Geology 449 or Geophysics 449, and Geology 461 or Geophysics 457

ANTIREQUISITE(S): Credit for both Geology 595 and 694 will not be allowed.

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:

| | |
|-------------------------------------|-----|
| Quiz (6 @ 7%) | 42% |
| Research paper | 25% |
| Presentation | 5% |
| Papers to read / summaries (5 @ 4%) | 20% |
| Comprehension quizz | 8% |

“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 scheduled

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 07 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. Non-programmable calculators will be permitted to answer quantitative questions on exams, if applicable, and permission to do this will be clearly indicated on the examination paper.

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 the research paper and summaries of papers to read 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 (FOIPPA). 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 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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DEPARTMENT OF GEOSCIENCE
COURSE OUTLINE

GEOLOGY 595.05
BASIN ANALYSIS

TERM: Winter 2014

PREREQUISITE(S): Geology 449 or Geophysics 449, and Geology 461 or Geophysics 457

LECTURER(S): Dr. B. Beauchamp ES 146 220-8266 bbeauch@ucalgary.ca

LECTURE : L01 MWF 09:00-09:50 KNB 131

LAB(S): B01 T 08:00-10:50 ES 242

TEXT-BOOK: Required (available at Bookstore): P.A. Allen and J.R. Allen, 2013 Basin Analysis, Third Edition, Wiley-Blackwell, 619 p.

MARK DISTRIBUTION:

A. Composition of Final Grade

| | |
|--------------------------------|-----|
| Quiz | |
| Quiz 1 | 7% |
| Quiz 2 | 7% |
| Quiz 3 | 7% |
| Quiz 4 | 7% |
| Quiz 5 | 7% |
| Quiz 6 | 7% |
| Research Paper | 25% |
| Presentation of research paper | 5% |
| Summary of articles to read | |
| Summary 1 | 4% |
| Summary 2 | 4% |
| Summary 3 | 4% |
| Summary 4 | 4% |
| Summary 5 | 4% |
| Comprehension Quiz | 8% |

C. Components of Course for Which a Passing Grade is Essential
none

D. Grading Scheme

| | |
|----|-----------|
| A+ | 95 – 100% |
| A | 86 – 94% |
| A- | 80 – 85% |
| B+ | 77 – 79% |
| B | 73 – 76% |
| B- | 70 – 72% |
| C+ | 67 – 69% |
| C | 63 – 66% |
| C- | 60 – 62% |
| D+ | 55 – 59% |
| D | 50 – 54% |
| F | <50% |

TENTATIVE LECTURE SCHEDULE

| W | Monday | Wednesday | Friday |
|----|--|---|--|
| 1 | Jan 06 2014 No class | Jan 08 2014 Course Introduction | Jan 10 2014 Basins in their geodynamic environment |
| 2 | Jan 13 2014 Physical state of the lithosphere I | Jan 15 2014 Physical state of the lithosphere II | Jan 17 2014 Physical state of the lithosphere III |
| 3 | Jan 20 2014 Quiz 1 Basins due to lithospheric stretching I | Jan 22 2014 Basins due to lithospheric stretching II | Jan 24 2014 Basins due to lithospheric stretching III |
| 4 | Jan 27 2014 Paper Summary 1 Basins due to flexure I | Jan 29 2014 Basins due to flexure II | Jan 31 2014 Basins due to flexure III |
| 5 | Feb 03 2014 Quiz 2 Basins associated with strike-slip deformation I | Feb 05 2014 Basins associated with strike-slip deformation II | Feb 07 2014 Basins associated with strike-slip deformation III |
| 6 | Feb 10 2014 Paper Summary 2 Effects of mantle dynamics I | Feb 12 2014 Effects of mantle dynamics II | Feb 14 2014 Effects of mantle dynamics III |
| 7 | Feb 17 2014 No class | Feb 19 2014 No class | Feb 21 2014 No class |
| 8 | Feb 24 2014 Quiz 3 Sediment provenance and routing system I | Feb 26 2014 Sediment provenance and routing system II | Feb 28 2014 Sediment provenance and routing system III |
| 9 | Mar 03 2014 Paper Summary 3 Basin stratigraphy I | Mar 05 2014 Basin stratigraphy II | Mar 07 2014 Basin stratigraphy III |
| 10 | Mar 10 2014 Quiz 4 Subsidence history I | Mar 12 2014 Subsidence history II | Mar 14 2014 Subsidence history III |
| 11 | Mar 17 2014 Paper Summary 4 Eustasy vs global tectonics I | Mar 19 2014 Eustasy vs global tectonics II | Mar 21 2014 Eustasy vs global tectonics III |
| 12 | Mar 24 2014 Quiz 5 Thermal history I | Mar 26 2014 Thermal history II | Mar 28 2014 Thermal history III |
| 13 | Mar 31 2014 Paper Summary 5 Petroleum play and resource assessment I | Apr 02 2014 Petroleum play and resource assessment II | Apr 04 2014 Petroleum play and resource assessment III |
| 14 | Apr 07 2014 Student presentations I | Apr 09 2014 Student presentations II | Apr 11 2014 Student presentations III |
| 15 | Apr 14 2014 Research Paper Quiz 6 Comprehension Quiz | Apr 16 2014 No class | Apr 18 2014 No class |