



UNIVERSITY OF CALGARY  
FACULTY OF SCIENCE  
DEPARTMENT OF GEOSCIENCE  
COURSE OUTLINE  
WINTER 2015

1. **Course:** Geology 595.05, Basin Analysis

Lecture Sections:

L01: MoWeFr, 09:00-09:50, SH 274

Labs: Tu. 17:00-20:00, ES 213

Instructor, Dr. B. Beauchamp, Office ES 146, Tel. No. 403-220-8266, e-mail address, [bbeauch@ucalgary.ca](mailto:bbeauch@ucalgary.ca),  
Office Hours: MoTuWeThFr 13:30-14:30

Geoscience Department ES 118, 403-220-5841, [geoscience.ucalgary.ca](http://geoscience.ucalgary.ca), [geoscience@ucalgary.ca](mailto:geoscience@ucalgary.ca)

2. **Prerequisites:** Geology 449 or Geophysics 449, and Geology 461 or Geophysics 457. See section 3.5.C in the Faculty of Science section of the online Calendar ([www.ucalgary.ca/pubs/calendar/current/sc-3-5.html](http://www.ucalgary.ca/pubs/calendar/current/sc-3-5.html))

**Antirequisite:** Credit for both Geology 595 and 694 will not be allowed.

**Note:** Students who have taken Geology 561 should take Geology 694.01, not 595.01.

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:

Composition of Final Grade

Quiz 1	6%
Quiz 2	9%
Quiz 3	6%
Quiz 4	8%
Quiz 5	7%
Research Paper	30%
Summary of articles to read	
Summary 1	4%
Summary 2	4%
Summary 3	4%
Summary 4	4%
Summary 5	4%
Comprehension Quiz	14%

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%

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:**

Required (sold in the University Bookstore): P.A. Allen and J.R. Allen, 2013 Basin Analysis, Third Edition, Wiley-Blackwell, 619 p.

All lecture material to be posted on D2L no later than the morning of a given lecture.

6. **Examination Policy:**

No aids will be allowed during in-class examinations (Quiz 1 to 5 and Comprehension Quiz). Students should also read the Calendar, [Section G](#), on Examinations.

7. **Writing across the curriculum statement:** e.g. 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 [Section E.2](#) of the University Calendar.

8. **OTHER IMPORTANT INFORMATION FOR STUDENTS:**

(a) **Misconduct:** 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: Students with Disabilities: <http://www.ucalgary.ca/pubs/calendar/current/b-1.html> [B.1](#) and Student Accessibility Services: <http://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](mailto:suvpaca@ucalgary.ca).  
SU Faculty Rep. Phone: 220-3913 Email: [sciencerep@su.ucalgary.ca](mailto: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) **U.S.R.I.:** 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](http://www.ucalgary.ca/usri)). Your responses make a difference – please participate in USRI Surveys.

Department Approval: Original Signed

Date: January 19, 2015

Associate Dean's Approval for

Alternate final examination arrangements: Original Signed

Date: January 16, 2015

## Course and Lab schedule GLGY 595.05

W	Monday (lecture)	Tuesday (Lab)	Wednesday (lecture)	Friday (lecture)
1	1A Jan 12 2015 Course Introduction		1B Jan 14 2015 Basins in their geodynamic environment I	1C Jan 16 2015 Basins in their geodynamic environment II
2	2A Jan 19 2015 Physical state of the lithosphere I		2B Jan 21 2015 Physical state of the lithosphere II	2C Jan 23 2015 Physical state of the lithosphere III
3	3A Jan 26 2015 <b>Quiz 1</b> Basins due to lithospheric stretching I		3B Jan 28 2015 Basins due to lithospheric stretching II	3C Jan 30 2015 Basins due to lithospheric stretching III
4	4A Feb 02 2015 Basins due to lithospheric stretching IV	Paper Summary 1 and discussion	4B Feb 04 2015 Basins due to flexure I	4C Feb 06 2015 Basins due to flexure II
5	5A Feb 09 2015 Basins due to flexure III		5B Feb 11 2015 Basins due to flexure IV	5C Feb 13 2015 Basins due to flexure V
6	6A Feb 16 2015 No class		6B Feb 18 2015 No class	6C Feb 20 2015 No class
7	7A Feb 23 2015 <b>Quiz 2</b> Basins associated with strike-slip deformation I	Paper Summary 2 and discussion	7B Feb 25 2015 Basins associated with strike-slip deformation II	7C Feb 27 2015 Basins associated with strike-slip deformation III
8	8A Mar 02 2015 Effects of mantle dynamics I		8B Mar 04 2015 Effects of mantle dynamics II	8C Mar 06 2015 Effects of mantle dynamics III
9	9A Mar 09 2015 <b>Quiz 3</b> Sediment provenance and routing system I	Paper Summary 3 and discussion	9B Mar 11 2015 Sediment provenance and routing system II	9C Mar 13 2015 Sediment provenance and routing system III
10	10A Mar 16 2015 Sediment provenance and routing system IV		10B Mar 18 2015 Basin stratigraphy I	10C Mar 20 2015 Basin stratigraphy II <i>Dr. Ashton Embry's presentation</i>
11	11A Mar 23 2015 Basin stratigraphy III	Paper Summary 4 and discussion	11B Mar 25 2015 Basin stratigraphy IV	11C Mar 27 2015 <b>Quiz 4</b> Subsidence history I
12	12A Mar 30 2015 Subsidence history II		12B Apr 01 2015 Thermal history I	12C Apr 03 2015 Thermal history II
13	13A Apr 06 2015 Petroleum play and resource assessment I	Paper Summary 5 and discussion	13B Apr 08 2015 Petroleum play and resource assessment II	13C Apr 10 2015 Petroleum play and resource assessment III
14	14A Apr 13 2015 <b>Quiz 5</b> USRI surveys		14B Apr 15 2015 Comprehension Quiz Research Paper (due 23:59h)	Apr 11 2014 No class