



## COURSE OUTLINE

### 1. **Course:** GLGY 343, 3D Geologic Structures and Methods - Winter 2024

Lecture 01 : MWF 10:00 - 10:50 in TI 140/148

Instructor	Email	Phone	Office Hours
Dr Alex Dutchak	alexander.dutchak@ucalgary.ca	403 210-6117	ES 240 Open-door policy or by appointment via email

To account for any necessary transition to remote learning for the current semester, courses with in-person lectures, labs, or tutorials may be shifted to remote delivery for a certain period of time. In addition, adjustments may be made to the modality and format of assessments and deadlines, as well as to other course components and/or requirements, so that all coursework tasks are in line with the necessary and evolving health precautions for all involved (students and staff).

#### **In Person Delivery Details:**

The course is planned to be delivered in-person to allow for better instructor-students communication. However, during the semester, three(3) are scheduled outside of lecture times to be delivered synchronously, online, via d2L Dropbox.

#### **Re-Entry Protocol for Labs and Classrooms:**

To limit the spread of COVID-19 on campus, the University of Calgary has implemented safety measures to ensure the campus is a safe and welcoming space for students, faculty and staff. The most current safety information for campus can be found [here](#). **Online Delivery Details:**

Some aspects of this course are being offered in real-time via scheduled meeting times. For those aspects you are required to be online at the same time.

To help ensure Zoom sessions are private, do not share the Zoom link or password with others, or on any social media platforms. Zoom links and passwords are only intended for students registered in the course. Zoom recordings and materials presented in Zoom, including any teaching materials, must not be shared, distributed or published without the instructor's permission.

The only online component are three (3) tests scheduled outside of regularly scheduled class hours as synchronous, online quizzes run via the Dropbox in d2L. This will give students more time to download (and print if necessary) the given Test file, do the work required, and upload the submitted Test file to the corresponding Dropbox. Schedule for the Tests is provided in the **Grading** section.

Both Lecture and Lab periods will be scheduled to run as **synchronous, in-person classes**. **Course**

#### **Site:**

D2L: GLGY 343 L01-(Winter 2024)-3D Geologic Structures and Methods

A Topics Schedule is posted on d2L and students should use it as a guide during the semester. Both Lecture slides and documents related to Lab Assignments will be posted in advance.

**Note:** Students must use their U of C account for all course correspondence.

#### **Equity Diversity & Inclusion:**

The University of Calgary is committed to creating an equitable, diverse and inclusive campus, and condemns harm and discrimination of any form. We value all persons regardless of their race, gender, ethnicity, age, LGBTQIA2S+ identity and expression, disability, religion, spirituality, and socioeconomic status. The Faculty of Science strives to extend these values in every aspect of our courses, research, and teachings to better promote academic excellence and foster belonging for all.

#### **Course Outcomes:**

- o Use appropriate terminology to define the orientation of lines and surfaces (planar/curved) in order to

describe the geometry of simple geological bodies.

- o Construct scaled geological maps based on information of the location and orientation of features of geological interest e.g. unit contacts, unconformities, faults.
- o Construct scaled geological cross-sections from surface and subsurface maps in order to illustrate and expose the true structure of given terrains.
- o Interpret simple geological maps and cross-sections to derive a sequence of geological events based on relative position and cross-cutting relationships between the geological units present.
- o Use stereonet to determine the angular relationships between linear and planar geological features e.g. true vs. apparent dips of cross-bedding, fold limbs and axial planes.
- o Know basic techniques of acquisition of geological data in the field including field notes, compass measurements, and measurement of stratigraphic columns.
- o Visualize the shape and dimensions of common geological structures represented on maps, cross-sections, photos, as well as on digital 3D terrain images

**2. Requisites:**

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

**Prerequisite(s):**

Geology 381.

**3. Grading:**

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the online University Calendar.

In determining the overall grade in the course the following weights will be used:

Course Component	Weight	Due Date (duration for exams)	Modality for exams	Location for exams
TopHat classroom participation <sup>1</sup>	6%	Ongoing		
Lab Assignments (11) <sup>2</sup>	44%	Ongoing		
Test 1 <sup>3</sup>	10%	Jan 31 2024, 6:30-8pm		
Test 2	10%	Mar 1 2024, 6:30-8pm		
Test 3	10%	Mar 25 2024, 6:30-8pm		
Registrar Scheduled Final Exam	20%	Will be available when the final exam schedule is released by the Registrar	in person	Will be available when the final exam schedule is released by the Registrar

<sup>1</sup> Based on participation only.

<sup>2</sup> Lab Assignments will be due by 6 pm on the Friday following each Lab.

<sup>3</sup> Tests 1, 2, and 3 take place outside of regularly scheduled classes to allow for a reasonable time to do a mapping/cross-section problem.

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component 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 a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
<b>Minimum % Required</b>	95.00 %	90.00 %	85.00 %	80.00 %	75.00 %	70.00 %	65.00 %	61.00 %	57.00 %	54.00 %	50.00 %

The Top Hat classroom response mark of 6% is based on participation only. Note that students don't have to be present for every question - a score of about 85% usually corresponds to a full mark. If you wish to opt-out of this mark the corresponding 5% will be added to the weight of the Final Exam.

**To opt-out of TopHat marks students must inform the instructor via email by the last day of classes (Apr 9).**

This course will have a Registrar Scheduled Final exam that will be delivered in-person and on campus. [The Final Examination Schedule](#) will be published by the Registrar's Office approximately one month after the start of the

term. The final exam for this course will be designed to be completed within 2.5 hours.

Labs take place on Tuesdays and the corresponding Lab Assignments can be substantially completed during the 3-hour lab periods. **Lab Assignments will be due by 6 pm on the Friday following each Lab .**

NOTE that this means that you will have a Lab Assignment to complete every week of the semester except for the 1st week of classes and the week of Feb 19 (term break). To derive the **grade for the Lab Assignments** the lowest mark obtained will be ignored when calculating the average of all the other Lab Assignments.

**Digital submission of Lab Assignments is required.** Every Lab will have a d2L Dropbox set-up for this purpose -*pdf file format required*. Please contact the instructor or your TA if you have concerns with this mode of delivery of the assignments and need to submit them as hard copies.

The University of Calgary offers a [flexible grade option](#), Credit Granted (CG) to support student's breadth of learning and student wellness. Faculty units may have additional requirements or restrictions for the use of the CG grade at the faculty, degree or program level. To see the full list of Faculty of Science courses where CG is not eligible, please visit the following website: <https://science.ucalgary.ca/current-students/undergraduate/program-advising/flexible-grading-option-cg-grade>

#### 4. **Missed Components Of Term Work:**

In the event that a student legitimately fails to submit any online or in-person assessment on time (e.g. due to illness, domestic affliction, etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date, or possible exemption and reweighing of components. Absences not reported within 48 hours will not be accommodated. Students may be asked to provide supporting documentation ([Section M.1](#)) for an excused absence, See [FAQ](#).

If an excused absence is approved, options for how the missed assessment is dealt with is at the discretion of the coordinator or course instructor. Some options such as an exemption and pro-rating among the components of the course may not be a viable option based on the design of this course.

**Lab Assignments are due by 6 pm on the Friday following each Lab .** Due dates can only be changed for legitimate reasons (e.g. illness or other justified conflict) with consent from the TA, who at times may consult with the course instructor. Any accommodations are decided on a case-by-case basis. Aside from the above, **late submissions of Lab Assignments are assigned a penalty of 25% per day, up to a maximum of 2 days (50%).**

#### 5. **Scheduled Out-of-Class Activities:**

The following out of class activities are scheduled for this course.

Activity	Location	Date and Time	Duration
Test 1	Online via d2L Dropbox	Wednesday, January 31, 2024 at 6:30 pm	105 Minutes
Test 2	Online via d2L Dropbox	Friday, March 1, 2024 at 6:30 pm	105 Minutes
Test 3	Online via d2L Dropbox	Monday, March 25, 2024 at 6:30 pm	105 Minutes

**REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY.** If you have a conflict with the out-of-class-time-activity, please contact your course coordinator/instructor no later than **14 days prior** to the date of the out-of-class activity so that alternative arrangements may be made.

The 105 minutes allowed for the Tests include time to download (and print if necessary) the given Test file, do the work required, and upload the submitted Test file to the corresponding Dropbox.

#### 6. **Course Materials:**

Required Textbook(s):

Bennison, Olver and Moseley, *Introduction to Geological Structures & Maps (8th Edition)*: Routledge.

The publisher (Taylor & Francis) makes the textbook freely available online - it can be read online or a .pdf copy of the ebook can be downloaded. See the following link:

<https://doi-org.ezproxy.lib.ucalgary.ca/10.4324/9780203783795>

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

A computer with a supported operating system, as well as the latest security, and malware updates;

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- o A current and updated web browser;
- o Webcam/Camera (built-in or external);
- o Microphone and speaker (built-in or external), or headset with microphone;
- o Current antivirus and/or firewall software enabled;
- o Stable internet connection.

For more information please refer to the UofC [ELearning](#) online website.

**7. Examination Policy:**

Exams typically require drafting tools including pencils, eraser, ruler (w/mm graduations), protractor, one or two triangles. A non-programmable calculator capable of trigonometric calculations is also required.

No other Quiz/Exam aids are allowed or necessary.

Students should also read the Calendar, [Section G](#), on Examinations.

**8. Approved Mandatory And Optional Course Supplemental Fees:**

There are no mandatory or optional course supplemental fees for this course.

**9. Writing Across The Curriculum Statement:**

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section [E.2](#) of the University Calendar.

**10. Human Studies Statement:**

Students will not participate as subjects or researchers in human studies.

See also [Section E.5](#) of the University Calendar.

**11. Reappraisal Of Grades:**

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

- a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work [form](#) to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections [I.1](#) and [I.2](#) of the University Calendar
- b. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section I.3](#) of the University Calendar.

**12. Other Important Information For Students:**

- a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus Mental Health Strategy website ([Mental Health](#)).
- b. **SU Wellness Services:** For more information, see their [website](#) or call [403-210-9355](tel:403-210-9355).
- c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email ([syva@ucalgary.ca](mailto:syva@ucalgary.ca)) or phone at [403-220-2208](tel:403-220-2208). The complete University of Calgary policy on sexual violence can be viewed [here](#).
- d. **Student Ombuds Office:** A safe place for all students of the University of Calgary to discuss student

related issues, interpersonal conflict, academic and non-academic concerns, and many other problems.

- e. **Student Union Information:** [SU contact](#), Email your SU Science Reps: [science1@su.ucalgary.ca](mailto:science1@su.ucalgary.ca), [science2@su.ucalgary.ca](mailto:science2@su.ucalgary.ca), [science3@su.ucalgary.ca](mailto:science3@su.ucalgary.ca),

f. **Academic Accommodation Policy:**

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf>

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf>.

Students needing an accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, by filling out the [Request for Academic Accommodation Form](#) and sending it to Brandon Karchewski by email [brandon.karchewski@ucalgary.ca](mailto:brandon.karchewski@ucalgary.ca) preferably 10 business days before the due date of an assessment or scheduled absence.

- g. **Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional [Code of Conduct](#) and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

[Student Handbook on Academic Integrity](#)  
[Student Academic Misconduct Policy and Procedure](#)  
[Faculty of Science Academic Misconduct Process](#)  
[Research Integrity Policy](#)

Additional information is available on the [Student Success Centre Academic Integrity page](#)

- h. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.
- i. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). 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 [Legal Services](#) website.
- j. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.

Electronically Approved - Jan 07 2023 10:32

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**Department Approval**

Electronically Approved - Jan 09 2023 09:02

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**Associate Dean's Approval**