1. **Course:** GLGY 493, Evolution of Earth Through Life and Time - Fall 2021
   Lecture 01: F 11:00 - 11:50 in MS 211

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Email</th>
<th>Phone</th>
<th>Office</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Alex Dutchak</td>
<td><a href="mailto:alexander.dutchak@ucalgary.ca">alexander.dutchak@ucalgary.ca</a></td>
<td>403 210-6117</td>
<td>ES 240</td>
<td>By Appointment</td>
</tr>
</tbody>
</table>

   **In Person Delivery Details:**

   Please see the Course Topic Schedule posted on the D2L page for a class-by-class schedule for the semester

   The lecture schedule for this class is complex:

   There is NO CLASS on Wednesday, Sept. 8.

   **From Friday, Sept. 10 through Friday, October 1, this course will meet on MWF from 11-11:50am IN PERSON in room MS 211.**

   **Starting the week of October 4, only FRIDAY lectures will be in-person.** As of Monday, October 4, the Monday and Wednesday lectures will be replaced by ASYNCHRONOUS and ONLINE lectures and/or activities.

   The only exception to the above statement is that WEDNESDAY, NOVEMBER 17 will be an in-person guest lecture from Dr. Charles Henderson.

   **ALL LABS for this course are IN-PERSON**

   **AGAIN:** Please check the Course Topic Schedule on D2L for a class-by-class schedule for the semester

   **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:**

   This course does not follow a scheduled meeting pattern.

   Online lectures/activities will commence on Monday, October 4th, and will include recorded lectures and/or online activities that are to be completed prior to each upcoming Friday's in-person class.

   **Course Site:**

   D2L: GLGY 493 L01-(Fall 2021)-Evolution of Earth Through Life and Time

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

2. **Requisites:**

   See section 3.5.C in the Faculty of Science section of the online Calendar.

   **Prerequisite(s):**
   Geology 381.

   **Antirequisite(s):**
   Credit for Geology 493 and 491 will not be allowed.

3. **Grading:**

   2021-09-08
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:

<table>
<thead>
<tr>
<th>Component(s)</th>
<th>Weighting %</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture Midterm 1</td>
<td>15</td>
<td>October 8, in-person, in class</td>
</tr>
<tr>
<td>Lecture Midterm 2</td>
<td>15</td>
<td>November 19, in-person, in class</td>
</tr>
<tr>
<td>Lecture Final Exam</td>
<td>25</td>
<td>Scheduled by registrar</td>
</tr>
<tr>
<td>Lab Exam</td>
<td>20</td>
<td>November 18, in-person, in lab</td>
</tr>
<tr>
<td>Lab Presentation</td>
<td>20</td>
<td>November 25 and Dec 2, in-person, in lab</td>
</tr>
<tr>
<td>Top Hat</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th></th>
<th>A+</th>
<th>A</th>
<th>A-</th>
<th>B+</th>
<th>B</th>
<th>B-</th>
<th>C+</th>
<th>C</th>
<th>C-</th>
<th>D+</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum % Required</td>
<td>92.00%</td>
<td>86.00%</td>
<td>82.00%</td>
<td>77.00%</td>
<td>74.00%</td>
<td>71.00%</td>
<td>67.00%</td>
<td>62.00%</td>
<td>58.00%</td>
<td>54.00%</td>
<td>50.00%</td>
</tr>
</tbody>
</table>

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:

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness 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. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, one possible arrangement is that the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course. This option is at the discretion of the coordinator and may not be a viable option based on the design of this course.

5. Scheduled Out-of-Class Activities:

There are no scheduled out of class activities for this course.
6. **Course Materials:**

   Recommended Textbook(s):

   Harold Levin and David King Jr., *The Earth through Time* Wiley.

   There is also an e-version of the required text available at the bookstore for a significantly lower price (but this cannot be resold at the end of the semester)

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

   For more information please refer to the UofC ELearning online website.

7. **Examination Policy:**

   No electronic or written aids (e.g. cell phones, tablets, comptuers, PDAs, notes, texbooks) will be allowed during 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.

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.

   Students' quality of writing will be factor in determining the final grades in many components of this course including exams and presentations.

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 [www.ucalgary.ca/wellnesscentre](http://www.ucalgary.ca/wellnesscentre) or call 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 (svsa@ucalgary.ca) or phone at 403-220-2208. The complete University of Calgary policy on sexual violence can be viewed at ([https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Sexual-and-Gender-Based-Violence-Policy.pdf](https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Sexual-and-Gender-Based-Violence-Policy.pdf))

d. **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](https://ucalgary.ca/legal-services/sites/default/files/teams/1/Code-of-Conduct.pdf) 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](https://ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf)
   - [Student Academic Misconduct Policy and Procedure](https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Student-Academic-Misconduct-Policy.pdf)
   - [Research Integrity Policy](https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/SRV_Misconduct_Policy.pdf)

Additional information is available on the [Student Success Centre Academic Integrity page](https://www.ucalgary.ca/student-success/academic-integrity).

e. **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](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](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 fulfill 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](https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Request-for-Academic-Accommodation-Form.pdf) and sending it to Jennifer Cuthbertson by email cuthberj@ucalgary.ca preferably 10 business days before the due date of an assessment or scheduled absence.

f. **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](https://www.ucalgary.ca/legal-services) website.

g. **Student Union Information:** [VP Academic](https://www.ucalgary.ca/su/vpacademic), Phone: 403-220-3911, Email: suvpaca@ucalgary.ca. [SU Faculty Rep.](https://www.ucalgary.ca/su/facultyrep), Phone: 403-220-3913, Email: sciencerep@su.ucalgary.ca. [Student Ombudsman](https://www.ucalgary.ca/su/ombuds), Email: ombuds@ucalgary.ca.

h. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](https://www.ucalgary.ca/student-success/academic-integrity)) 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.

i. **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.

Course Outcomes:

- Describe how the Earth's crust, atmosphere, and oceans have evolved throughout Earth history, and explain the evidence used to make these inferences
- Define the term 'taphonomy', explain in general terms how fossils can be formed, and discuss taphonomic biases and how they affect our interpretations of the fossil record
- Explain the concepts of natural selection and evolution, differentiated between the two concepts, and provide examples of evolution in plants and animals throughout the Late Proterozoic and Phanerozoic eons
- Assess the fossil evidence of life, and describe the major evolutionary radiations and extinction events that are recorded in the rock record
- Explain how the biosphere has interacted with and altered the lithosphere, atmosphere, and hydrosphere throughout Earth history, and explain the evidence used to make these inferences
- Use the location and age of geological deposits and structures to infer the order and type of events involved in the evolution of North America throughout the Phanerozoic Eon.