

Dinosaurs – EARTH 2401 – Course Outline 2018

This course uses pre-recorded video lectures from the Fall 2017 term. Lectures can be viewed streamed (<http://vod.cuol.ca/stream/web-channel>), in one of Carleton's viewing rooms (D299 Loeb; <https://carleton.ca/cuol/current-students/in-house-viewing/>) or by **Video On Demand** (<https://vod.cuol.ca/vod/vod-course-list>). Videos are presented in weekly 2 hour, 45 minute blocks that combine two lectures back to back. The same episode is streamed twice a week. The free streaming times on the CUOL Web Channel are:

Initial Show Time Monday, 9:45 am – 12:30 pm.

Repeat Show Time Tuesday, 1:30 am – 4:15 am.

Note – Schedules are subject to change. The webcast may be subject to connection interruptions and/or other technical issues. For these reasons CUOL cannot guarantee the CUOL Web Channel as the primary means of access for registered students. CUOL recommends having access to backup viewing options such as the viewing kiosks in the CUOL Student Centre or the Video On Demand service.

All other course content will be posted to **CULEARN** (<https://culearn.carleton.ca/>).

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Teaching Assistants: TBA.

The course is CULEARN supported. Please check frequently for announcements and updates. Lectures in PDF format will also be posted. Due to copyright laws this material will only contain text slides and images not affected by these laws. These slides will be posted the day before each lecture to make note taking easier for you, but reading the slides alone is not a complete substitute for watching the videos. The weekly quizzes will also be on CULEARN, based on the previous week's lectures. These quizzes will start in the week of Sept. 17 and are part of your final grade, so complete them in time. Once the quiz begins, you will have a limited time to complete it. We will not reopen quizzes after the allotted time.

It is important that you have access to CULEARN. If you have difficulties connecting, please solve these issues with the university.

GRADE BREAKDOWN

Midterm Examination: 30% (2 hours) taking place on **Saturday October 13, 11:30 am – 1:30 pm** (rooms TBA).

On-line Quizzes: 20%

Final Examination: 50% (2 hours)

The early midterm date gives you a sign for how you are performing in this class. Please arrange your schedule accordingly. A valid excuse for missing the midterm is for medical reasons or death in the family, and must be documented with a medical certificate (see also the section Academic Accommodation). Other excuses (eg. attending weddings, personal vacations, etc.) are not valid. In such circumstances there will be no make-up midterm. The grade weighting corresponding to the test that was missed will be added to the grade weighting of the final exam (i.e. the final exam will count for 80% of the grade, so missing the midterm is *not* an advantage to you). The make-up exam date will be scheduled by Renea Free of Carleton University OnLine for only those who have presented a medical certificate. The final will have a make-up exam with the university rules attached. You will not be allowed to write a make-up exam on a date before the main exam. The exam material for the midterm and final is not cumulative; this is to your advantage. When it gets closer to the midterm, you will be reminded of the exact lectures that need to be studied. Due to the size of this class, both examinations will consist of multiple choice and true/false questions. A scantron sheet will be used for the multiple choice questions. Your marks will then be uploaded into the online gradebook.

There will also be a short bonus assignment for adding up to 5% to your final grade; details will be posted on CULEARN.

COURSE LEARNING OBJECTIVES

1. Identify the major events in the evolution of life on Earth.
(Remembering and Understanding)
2. Relate large-scale changes in earth history as related to plate movements and Earth's paleoenvironmental changes.
(Understanding and Analyzing)
3. Explain the importance of fossils for paleoenvironmental interpretations.
(Remembering)
4. Explain the position of dinosaurs in the evolutionary history of life and their development throughout the Mesozoic Era, including extinction theories. (Remembering, Analyzing and Understanding)
5. Distinguish dinosaurs according to characters of fossil remains.
(Remembering and Understanding)
6. Analyze dinosaur intraspecific and interspecific behaviour through time.
(Remembering and Understanding)

Suggested reading:

D.E. Fastovsky and D.B. Weishampel, 2016. *Dinosaurs, A Concise Natural History*. Cambridge University Press (ISBN 978-1316501153).

This book can be ordered online. It is recommended, but not mandatory. An earlier edition (2009 or 2012) is also fine, if you can find one.

Lecture topics and dates

Lectures are based on a variety of sources, not only on the textbook. The order is also diverging from the textbook, but related chapters are named after lectures (chapter numbers follow the 2012 edition of the textbook). The following *approximate* schedule is adapted from the schedule from the 2017 Syllabus; topics were actually covered in this course with slight shifts in associated dates due to progress at the time.

Episode 1, Sept. 10: 9-11-17: Introduction to the course: a cross section through the fossil record (**no slides posted**)/9-13-17: Earth' changing paleogeography and the Mesozoic landscape (chapter 2)

Episode 2, Sept. 17: 9-18-17: Taphonomy: How do fossils form? (chapter 1)/9-20-17: Taxonomic order in the natural world: where do dinosaurs fit? (chapter 3)

Episode 3, Sept. 24: 9-25-17: Dinosaur anatomy (chapter 4)/9-27-17: Fossil prospecting, collecting and preparation (chapter 1)

Episode 4, Oct. 1: 10-2-17: Dinosaurs in history/10-4-17: Stegosaur and Ankylosaur (chapter 5)

Episode 5, Oct. 15: 10-11-17: Pachycephalosaurs (chapter 6)/10-16-17: Ceratopsia: Horns and frills (chapter 6)

Episode 6, Oct. 29: 10-18-17: Ornithomimids: The great herds (chapter 7)/10-30-17: Sauropods: the giants (chapter 8)

Episode 7, Nov. 5: 11-1-17: Theropoda of the Triassic and Jurassic (chapter 9) guest lecture by Bradley McFeeters/11-6-17: Theropoda of the Cretaceous (chapter 9) guest lecture by Bradley McFeeters

Episode 8, Nov. 12: 11-8-17: Pterosaurs/11-13-17: Dinosaur tracks (ichnology)

Episode 9, Nov. 19: 11-15-17: Dinosaur's thermoregulation (chapter 12)/11-20-17: Patterns of dinosaur evolution (chapter 13)

Episode 10, Nov. 26: 11-22-17: Marine Reptiles/11-27-17: Extinction events in geological history

Episode 11, Dec. 3: 11-29-17: The extinction at the Cretaceous/Tertiary boundary (chapter 15)/12-4-17: Biotic recovery and the rise of mammals

ACADEMIC ACCOMODATION

You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

Pregnancy obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website:

carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Religious obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website:

carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. carleton.ca/pmc

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and its survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: carleton.ca/sexual-violence-support

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

<https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

For more information on academic accommodation, please contact the departmental administrator or visit: students.carleton.ca/course-outline