

H. C. Maddin, HP 2239
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ERTH 3111

Vertebrate Evolution II – Evolution of mammals, reptiles and birds

Lecture: Thursday 8:35am – 10:25pm
Lecture office hour: by appointment

Lab: Friday 8:35-11:25am

Course objectives

Learn details of the anatomy of living and extinct amniotes, and comparative anatomy between groups of amniotes.

Understand currently accepted patterns of relationships between major amniote groups.

Describe key evolutionary events in the origin and radiation of mammals, reptiles and birds.

Integrate evolutionary mechanisms (developmental & functional) with patterns of diversity in amniotes.

Learning outcomes

By the end of this course, students will be able to...

Recall the anatomy of amniotes.

Describe and **evaluate** patterns of relationships between major amniote groups.

Describe key evolutionary events in the origin and radiation of amniotes.

Integrate evolutionary mechanisms with patterns of diversity in amniotes.

Lecture materials

Textbook: Vertebrate Palaeontology, by M. J. Benton

Mark breakdown

Lecture mid-term 15%

Lab mid-term 15%

Bone project 20%

Final lab exam 20%

Final lecture exam 30%

Lecture schedule

Lecture 1: Introduction & Amniote origins

Lecture 2: Basal synapsids

Lecture 3: Mammal origins

Lecture 4: Mammals

Lecture 5: Early reptiles

Lecture 6: Marine reptiles

Lecture 7: **Mid-term**

Lecture 8: Lepidosauria

Lecture 9: Archosauria

Lecture 10: Ornithodira & Dinosauria 1

Lecture 11: Dinosauria 2

Lecture 12: Birds

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Requests for Academic Accommodation

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