



Biology (BIOL) 320

Comparative Anatomy of the Vertebrates (Revision 2)

Status:

Replaced with new revision, see the [course listing](#) for the current revision

Delivery mode:

Individualized study online with a Supervised Lab . BIOL 320 has a lab exemption This course is charged a lab fee

Credits:

3

Area of study:

Science

Prerequisites:

BIOL 204 or BIOL 205 , or BIOL 235 or 3 credits in science completed at a recognized post-secondary institution and the course coordinator approval.

Precluded:

None

Challenge:

BIOL 320 is not available for challenge.

Faculty:

Faculty of Science and Technology

BIOL 320 includes a mandatory four-day

Notes:

supervised lab component.

Check **dates and locations** [↗](#) of supervised lab prior to registering for the course.

Overview

This course covers all major aspects of the anatomy of the vertebrates, including basic comparative anatomy.

Outline



- Unit 1: The Science of Comparative Anatomy and Vertebrate Relationships
- Unit 2: Craniate Types, Phylogeny, and Morphogenesis
- Unit 3: The Integument and Its Derivatives
- Unit 4: The Skeleton
- Unit 5: The Muscular System and Electric Organs
- Unit 6: Coelom and Mesenteries
- Unit 7: The Digestive System
- Unit 8: The Respiratory System and Gas Bladder
- Unit 9: The Circulatory System
- Unit 10: The Urogenital System
- Unit 11: The Nervous System
- Unit 12: Sensory and Endocrine Organs

Learning outcomes

Upon successful completion of this course, you will be able to

1. Correctly apply and define scientific terminology used in the context of vertebrate anatomy.
2. Identify the anatomical features that distinguish vertebrate from invertebrate systems.
3. Recognize vertebrate structural principles by studying all body systems of vertebrates in an evolutionary context.
4. Compare and contrast the anatomical systems of different vertebrates and identify common traits across species and/or groups.
5. Develop practical dissection skills on vertebrate cadavers that allow for identification of morphological features and effective collection and preparation of animal tissue specimens

Evaluation

To **receive credit**  for BIOL 320, you must achieve a minimum grade of 60 percent on the laboratory evaluation, a grade of at least 50 percent on the final examination, and a course composite grade of at least **D (50 percent)** . The weighting of the composite grade is as follows:

Activity	Weight
Assignment 1	10%
Assignment 2	10%
Laboratory Evaluation	20%
Midterm Exam	20%
Final Exam	40%
Total	100%


The **midterm and final examinations** for this course must be requested in advance and written under the supervision of an AU-approved exam invigilator. Invigilators include either ProctorU or an approved in-person

invigilation centre that can accommodate online exams. Students are responsible for payment of any invigilation fees. Information on exam request deadlines, invigilators, and other exam-related questions, can be found at the **Exams and grades** [↗](#) section of the Calendar.

To learn more about assignments and examinations, please refer to Athabasca University's **online Calendar** [↗](#).

Materials

Hildebrand, M., & G. Goslow. (2001). *Analysis of vertebrate structure* (5th ed.). New York: Wiley.

 (Online)

Other Materials

All AU Course Materials are available online; however, they can be provided in print by special request.

Important links

- › [Academic advising](#) [↗](#)
- › [Program planning](#) [↗](#)
- › [Request assistance](#) [↗](#)
- › [Support services](#) [↗](#)
- › [Lab dates and locations](#) [↗](#)

Athabasca University reserves the right to amend course outlines occasionally and without notice. Courses offered by other delivery methods may vary from their individualized study counterparts.

Opened in Revision 2, May 5, 2016

Updated August 8, 2024

View **previous revision** [↗](#)
