Biology (BIOL) 207

Principles of Biology II (Revision 4)

Status:	Replaced with new revision, see the **course listing** for the current revision
Delivery mode:	**Individualized study online** or **Grouped study** with a **Supervised Lab**. This course is charged a **lab fee**. Delivered via Brightspace.
Credits:	3
Area of study:	Science
Prerequisites:	**BIOL 204** or equivalent, and professor approval.
Precluded:	**BIOL 205**, LABB 207
Challenge:	BIOL 207 is not available for challenge.
Faculty:	**Faculty of Science and Technology**
	This course has a **mandatory, five-day supervised lab component** (usually offered in Athabasca during the summer months). Check

Notes:	**dates and locations** of supervised lab prior to registering for this course. Students who **do not** require an onsite laboratory component to meet transfer credit requirements may consider taking **BIOL 205** (which has home labs only, no supervised lab component) instead of BIOL 207. Please note, however, that BIOL 207 is a required course for Athabasca University students in Science programs and cannot be substituted with BIOL 205. (Exceptions: Students in the Bachelor of Science (Post Diploma) program who have successfully completed a biology lab component and students in the Biology Minor program)

Overview

Biology 207 is the second of two introductory courses in general biology that will prepare students for senior-level biology courses. Designed to help students learn more about the nature of life, the main topics of this course include the diversity of organisms, including fungi, plants, protists, animals, and bacteria. The course will emphasize evolution as the overriding biological principle. This course also includes a five-day, in-person lab component.

Outline

BIOL 207 covers two main units (Evolution and Diversity), divided into six units:

- Unit 1: Principles of Evolution (Evolutionary theory; natural, artificial and sexual selection; microevolution; population genetics; macroevolution)
- Unit 2: Evolutionary History (Chemical evolution, evolution of cells, history of life, human evolution)
- Unit 3: Diversity of Life I (Prokaryotes, viruses, prions)

- Unit 4: Diversity of Life II (Protists, fungi, plants)
- Unit 5: Diversity of Life III (Animals)
- Unit 6: Conserving and Utilizing Biodiversity (Conservation of biodiversity, domestication)

Simulation exercises of evolutionary processes include dog domestication and sickle cell alleles in African malaria areas (using SimBio software).

Laboratory Outline

The intensive, five-day, 40-hour onsite lab covers topics from both BIOL 204 and BIOL 207 and includes the following main lab activities: microscopy; microbiology; sterile techniques; enzyme lab; electrophoresis; spectrometry; molecular biology; restriction enzymes; animal diversity; fetal pig dissection; diversity of fungi, plants and protists; evaluation of experiments; and lab report writing.

Students who have attended an equivalent lab at another institution may qualify for a **lab exemption** .

Evaluation

To **receive credit** for BIOL 207, you must achieve a course composite grade of at least **D (50 percent)** and a minimum of 50 percent for the lab evaluation, and a grade of at least 50 percent on the final examination. The weighting of the composite grade is as follows:

Activity	Weight
Assignment 1	10%
Assignment 2	10%
Simulation Exercises	15%
Lab evaluation	25%
Midterm exam	15%

Activity	Weight
Final exam	25%
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.

Materials

Digital course materials

Links to the following course materials will be made available in the course:

Russell, P. J., et al. (2016). *Biology: Exploring the diversity of life* (3rd Canadian ed.). Toronto, ON: Nelson Education.

Other Resources

All other learning resources will be available online.

Important links

- **Academic advising**
- **Program planning**
- **Request assistance**
- **Support services at AU**
- **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 4, October 4, 2024

Updated September 4, 2025

View **previous revision**