



University Bulletin

Undergraduate Degree Programs

Biology (BIOL)

BIOL 110 (GN) Biology: Basic Concepts and Biodiversity (4) A study of the evolution of the major groups of organisms including the fundamental concepts of biology.

**BIOL 110 Biology: Basic Concepts and Biodiversity (3)
(GN)**

(BA) This course meets the Bachelor of Arts degree requirements.

This is the first biology course taken by students who intend to major in biology. It provides a foundation for the basic concepts that govern life. In addition, these concepts are used to explain the processes of evolution which contribute to the biodiversity that we observe today. The course objectives have remained unchanged and seek to provide students with a fundamental understanding of: 1) features of life; 2) how basic genetic processes provide continuity between generations; 3) how genetic variation arises and contributes to evolutionary processes; 4) how structure relates to function; 5) how the diversity life is studied and explained by evolution. Current evaluation methods in the lecture part of the course include three "mid-term" exams and a comprehensive final exam. Evaluation methods in the lab portion of the course include in-class quizzes, one or more lab reports on experiments or data analysis conducted in lab sessions. Points earned on lecture exams typically comprise 70% of the total points, whereas points earned in lab typical comprise 30% of the total points earned in the course. However, we have developed an extensive set of web-based interactive tutorials for this course (see <http://www.bio.psu.edu/biol110mellon/index.jsp>) that contain an instructor reporting feature and in future years student on-line performance may comprise 10% of the grade (with a proportional reduction in exam points). Biol 110 is offered twice each year in the Fall and Summer. This course is currently enrolls approximately 1100 students at the UP campus and about the same numbers at the Commonwealth Campuses. The online tutorials may allow us, in the future, to be more flexible in how and when the course is offered. Given the large enrollment at UP, Biol 110 requires significant facilities and equipment. Lecture presentations typically use overhead projectors, video equipment, Apple computers and PCs, and in some cases digital document and video cameras. Such equipment is available in technology classrooms. Lab equipment needed in this course includes: compound microscopes, dissecting microscopes, overhead projectors, video projectors and laptop computers. The online tutorials are computationally intensive and require a robust web server. Most students use their own computers to access the tutorials, but these can be accessed from any computer lab on campus.

General Education: GN

Diversity: None

Bachelor of Arts: Natural Sciences

Effective: Fall 2003

Note : Class size, frequency of offering, and evaluation methods will vary by location and

instructor. For these details check the specific course syllabus.

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