

Florida Department of Education  
COURSE DESCRIPTIONS - GRADES 9.12, ADULT

**Subject Area:** Science  
**Course Number:** 2000810  
**Course Title:** Biology II - International Baccalaureate  
**Credit:** 1.0  
**Will meet graduation requirement for Science**

- A. Major concepts/content.** The purpose of this course is to provide a study of the facts, principles and processes of biology. The course also includes collection and interpretation of data and formulation of hypotheses from available data.

The content should include, but not be limited to, the following:

- content specified in the subsidiary-level biology syllabus of the International Baccalaureate Program and by the Advanced Placement Program

- B. Special note.** Laboratory investigations of selected topics in content, which also include the use of scientific method, measurement, laboratory apparatus, and safety procedures, are an integral part of this course.

- C. Course Requirements.** After successfully completing this course, the student will:

1. Use the scientific method to solve problems, employ metric measurements, and demonstrate safe and effective use of laboratory instruments.
2. Design an experiment to answer a specific scientific question.
3. Analyze living systems with respect to bioenergetics.
4. Analyze the biochemical composition of organisms.
5. Describe cell infrastructure and physiology.

6. Describe cell cycles including meiosis, mitosis, and cytokinesis.
7. Describe the principles of genetics, including Mendelian and molecular genetics.
8. Describe the levels of biological organization from subcellular to multicellular.
9. Describe plant and animal physiology in terms of structure, function, and biochemical processes.
10. Discuss the changes in organisms through time.
11. Understand selected principles of ecology.
12. Communicate scientific ideas orally and in writing.
13. Analyze scientific information critically and recognize the limitation of scientific inquiry.