

Pensacola State College Section Syllabus  
BSC 1010 Principles of Biology

**Instructor: Dr. Iris Knoebl**  
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**Credits:** 3 cc

**Prerequisites:**

Placement at the college level or completion of the appropriate exit-level developmental course(s) with a grade of C or better.

**Corequisites:** BSC 1010L.

**Course Description:** A study of the cellular, genetic, and evolutionary principles which form the foundations of biology. Emphasizes biomolecules, cell structure and function, protein synthesis, genetics, and organic evolution. The first course for biology majors.

**Offered:** FA, SP, SU.

**Distribution:** Meets AA General Education Core, Natural Sciences (Biological Sciences) requirement.

**Textbooks:**

Biology w/ Connect Access; Raven, Johnson, Mason, Losas, Duncan; 9781264671120; 12; McGraw Hill; 2020

**Supplemental Materials:** None

**Special Requirements:**

Student Expectations—Students enrolled in this course can expect the following: 1) clearly identified course objectives; 2) productive class meetings; 3) a positive learning environment; 4) opportunities for appropriate student participation; 5) effective instruction; 6) positive and appropriate interactions; 7) assistance with meeting course objectives during and beyond class hours; 8) evaluation of student performance and appropriate and timely feedback; and 9) clear and well-organized instruction.

**General Education Student Learning Outcomes:**

**Critical Thinking:** The student analyzes, evaluates, and, if necessary, challenges the validity of ideas, principles, or data in order to develop informed opinions, probable predictions, or defensible conclusions.

**Scientific and Mathematical Literacy:** The student properly identifies and applies scientific or mathematical principles and methods.

**Information Literacy:** The student effectively locates, evaluates, and applies information from a variety of sources.

**Course Learning Outcomes:**

1. Understand the scientific method and hypothesis testing.
2. Evaluate the molecular structure of water and its importance as a biological molecule.
3. Describe the molecular structure of biological molecules (proteins, fats, carbohydrates and nucleic acids) and their role in biological systems.
4. Appreciate the structure of the cell and the functions of organelles.

5. Understand the structure of nucleic acids and the processes of replication, transcription and translation.
6. Identify cellular metabolism, enzyme function, cellular respiration, and photosynthesis.
7. Explain diffusion, osmosis, and cell membrane function, including protein channels and carriers.
8. Describe the cell cycle and cell cycle control.
9. Become familiar with simple and complex inheritance patterns.
10. Understand the genetic variation produced by meiosis and sexual life cycles.
11. Appreciate the regulation of gene expression.
12. Explain cellular communication and signal transduction.

### **Methods of Evaluation:**

**Exams:** Five exams will be given, including the final exam. The final exam will be comprehensive. Each exam is worth 100 points.

**Assignments/Quizzes:** There will also be 15 Connect SmartBook reading assignments (10 points each) with questions for each chapter. Homework assignments in Connect will be available for study purposes but will not be graded. All Smartbook and homework assignments will be done through the McGraw Hill Connect tab in eLearning/Canvas. I may also occasionally assign in-class discussions and end of class quizzes. These end-of-class quizzes will count for points, so please be sure to take notes during class.

Exams -- 500 points

Smartbook assignments -- 150 points

Other quizzes and assignments -- to be determined.

**Grading Criteria:** Final grades are determined by averaging all test scores, quizzes and homework assignments.

The grading scale (in percentage points) is as follows:

100 - 90	A	77 - 70	C
89 - 88	B+	69 - 68	D+
87 - 80	B	67 -60	D
79 -78	C+	59 and below	F

### **Student Email Accounts:**

Pensacola State College provides an institutional email account to all students enrolled in courses for credit. PirateMail is the official method of communication, and students must use Piratemail when communicating with the College. In cases where companion software is used for a particular class, email may be exchanged between instructor and student using the companion software.

### **Flexibility:**

It is the intention of the instructor to accomplish the objectives specified in the course syllabus. However, circumstances may arise which prohibit the fulfilling of this endeavor. Therefore, this syllabus is subject to change. When possible, students will be notified of any change in advance of its occurrence.

### **ADA Statement:**

Students with a disability that falls under the Americans with Disability Act or Section 504 of the Rehabilitation Act, it is the responsibility of the student to notify Student Resource Center for ADA Services to discuss any special needs or equipment necessary to accomplish the requirements for this course. Upon completion of registration with the Student Resource Center for ADA Services office, specific arrangements can be discussed with the instructor.

**Equity Statement:**

Pensacola State College does not discriminate against any person on the basis of race, color, national origin, sex, disability, age, ethnicity, religion, marital status, pregnancy, sexual orientation, gender identity or genetic information in its programs, activities, and employment. For inquiries regarding the College's nondiscrimination policies, contact the Executive Director of Institutional Equity and Student Conduct, 1000 College Blvd., Building 5, Pensacola, Florida 32504, (850) 484-1759.

**Security Statement:**

Pensacola State College is committed to encouraging all members of the College community to be proactive in personal safety measures. In case of emergency, students should ensure that they are aware of the building exit closest to each of their classrooms, as well as all alternative building exits in case circumstances require using a different route.

**Emergency Statement:**

In the case of severe weather or other emergency, the College administration maintains communication with appropriate state and local agencies and makes a determination regarding the cancellation of classes. Notices of cancellation will be made through the College's PSC Alert system and on the College's website.