

BI 211 : Principles of Biology 1

Includes introduction to science, biochemistry, metabolism, the cell, molecular biology, and reproduction. The first course of a three-course sequence for students majoring in biology and other sciences, including premedical, pre-dental, and related fields.

Addendum to Course Description

To clarify the teaching of evolution and its place in the classroom, Oregon Coast Community College affirms the following statements about what qualifies as science and how the theory of evolution is the major organizing theory within biology:

- Science is a non-dogmatic and self-correcting investigatory process. In science, a theory is neither a guess, dogma, nor myth. Instead, theories are explanations for natural phenomena based on a preponderance of evidence. Theories developed through scientific investigation are not decided in advance but can be and often are revised through observation and experimentation.
- The theory of evolution meets the criteria of a scientific theory. In contrast, 'creation science', 'intelligent design' or similar designations are neither self-examining nor investigatory. 'Creation science' is not considered a legitimate science, but instead a form of religious advocacy and pseudoscience. This position is established by legal precedence (*Webster v. New Lenox School District* #122, 917 F. 2d 1004).
- Teaching evolution is a necessary foundational framework for understanding biology because it explains the unity and diversity of life past and present. Evolution is not a controversial topic in the scientific community because it is overwhelmingly supported by scientific evidence.

Biology instructors of Oregon Coast Community College will teach the theory of evolution not as absolute truth but as the most widely accepted scientific theory on the diversity and unity of life. Furthermore, they will stand with such organizations as the National Association of Biology Teachers in opposing the teaching of pseudo-sciences.

Credits 5

Prerequisites

Passing score on the chemistry competency exam or completion of a year of high school chemistry with a grade of C or better within the last three years.

Subject

Biology

Course Outcomes

Students will be able to:

- Apply biological theories and concepts from biochemistry and cell biology to novel problems in their lives and community (personal, work, and career).
- Use the scientific method, including experimental design, data collection, and presentations of results and conclusions while analyzing their individual thinking and learning styles and how their styles can be integrated with methods used in science.
- Assess the strengths and weaknesses of scientific studies in biochemistry and cell biology and critically examine the influence of scientific and technical knowledge of biochemistry and cell biology on human society and the environment.
- Develop informed positions and opinions on contemporary issues in biochemistry and cell biology, while considering ethical, scientific, community, and cultural implications.
- Communicate concepts in biochemistry and cell biology using appropriate terminology in both written and verbal forms.

Prerequisite Courses

WR 115

RD 115

MTH 95