

BI 212 : Principles of Biology 2

Includes inheritance, the genetic code, modern and classical genetics, evolution, diversity, and systematics. May include some dissection of plants and animals. The second course in a three-course sequence for students majoring in biology and other sciences, including pre-medical, 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

Subject

Biology

Course Outcomes

students will be able to:

- apply biological theories and concepts to novel problems in genetics, evolution, and systematics;
- assess the strengths and weaknesses of scientific studies in genetics, evolution, and systematics and critically examine the influence of scientific and technical knowledge of genetics, evolution, and systematics on human society and the environment.
- apply concepts from genetics, evolution, and systematics to their lives and community (personal, work, and career);
- develop informed positions and opinions on contemporary issues in genetics, evolution, and systematics, while considering ethical, scientific, community, and cultural implications;
- communicate concepts in genetics, evolution, and systematics using appropriate terminology in both written and verbal forms.

Prerequisite Courses

BI 211