

From the web page “Bacc Core Learning Outcomes, Criteria and Rationale” (<https://main.oregonstate.edu/baccalaureate-core/current-students/bacc-core-learning-outcomes-criteria-and-rationale>)

## **PERSPECTIVES**

### **Biological and Physical Sciences**

- ***Student Learning Outcomes (must appear on syllabus and be assessed)***

Students in these courses shall:

1. Recognize and apply concepts and theories of basic physical or biological sciences.
2. Apply scientific methodology and demonstrate the ability to draw conclusions based on observation, analysis, and synthesis.
3. Demonstrate connections with other subject areas.

- ***Criteria for course approval and continuation***

Science courses shall:

1. Be at least four credits, contain a laboratory, and accessible to both lower and upper division students. Prerequisites or class-level restrictions for Perspectives courses must not create unreasonable barriers for students seeking to fulfill these categories;
2. Emphasize elements of critical thinking;
3. Focus on the meaning of the fundamental concepts and theories that broadly characterize basic (rather than applied) physical or biological science;
4. Illustrate, demonstrate, and analyze natural phenomena and systems;
5. Provide historical perspectives and context on the evolution of major theories and ideas;
6. Demonstrate interrelationships or connections with other subject areas; and
7. Examine the nature, value, and limitations of scientific methods and the interaction of science with society.

- ***Rationale***

Science seeks to develop a fundamental description and understanding of the natural world, from elementary particles to the cosmos, including the realm of living systems. Students should have the opportunity to explore the insights of science, to view science as a human achievement, and to participate in scientific inquiry. This experience includes the challenge of drawing conclusions based on observation, analysis, and synthesis. To ensure a broad perspective, the science requirement consists of two parts: physical science (including earth science) and biological science.