Biol 212 Lecture Learning Outcomes

Course Learning Goals from Syllabus

Biology 212 deepens student understanding of core concepts in Biology, thereby supporting student success in advanced life science courses and providing a foundation for life-long learning. The course also advances student understanding of the nature of science and helps students to practice and improve critical thinking skills.

Upon completion of BIOL 212, students should be able to:

Core Concept 1: Information flow (29%)*
- Diagram the processes by which genetic information is replicated and expressed in cells.
- Describe examples of signals that are relayed within cells, and of signals between cells.

Core Concept 2: Structure and function (6%)**
- Describe the structural features of diverse cell types and tissues, and explain how these features enable function.

Core Concept 3: Transformations of energy and matter (25%)
- Diagram how energy is harvested, transferred, and stored within plant and animal cells.
- Compare different mechanisms involved in the movement of ions, molecules and other components within and between cells. Some mechanisms require energy inputs; others do not.

Core Concept 4: Systems (35%)
- Describe and explain examples in which coordinated activities and functions of cells, tissues, and organ systems enable responses to environmental signals/stimuli.
- Explain how disruptions in these processes can lead to disease.

Core Competencies / process of science skills (5) [5%]
- Demonstrate the ability to read and interpret data figures and tables within the context of examples from introductory biology.
- If given a hypothesis, evaluate whether the data supports or does not support the hypothesis.

* Average from 3 sections of Biol 212 lecture (Spring 2019)
**There is some overlap between Core concept 2 and 4, so this percentage has been underestimated for this specific core concept.