

# Biology Department – Assessment of Student Learning Outcomes

## Student Learning Outcomes, Assessment Methodology and Timeline:

***SLO 1: Majors in the Biology Department should be able to communicate scientific observations, analyses, and arguments and to critically evaluate the scientific merit of articles and/or lectures.***

**Assessment method** - All Biology majors are required to take BIOL 431, Senior Seminar, in their senior year. Students are required to give two oral presentations on scientific literature and are graded on their ability to critically evaluate the material and communicate effectively. The assessment rubric is attached.

**Timeline** – Senior Seminar is offered every semester; assessment data will be collected every semester and evaluated annually.

***SLO 2: Majors in the Biology Department should possess a solid comprehension of basic principles in the biological sciences, the nature of science, and the basis of scientific laws and theories.***

**Assessment method** – The Biology Major Field Test is a standardized exam used by 280 colleges and universities in the United States to assess student knowledge of biology content and analytical capabilities. Last year, 7,681 students took the exam.

**Timeline** – The exam will be given every three years to graduating SUNY Fredonia Biology department seniors.

***SLO 3 - Majors in the Biology Department should be able to design experiments, and collect, analyze, and interpret data.***

**Assessment method** - All Biology majors are required to take BIOL 330/331 Ecology lecture and lab. Ecology students are required to design experiment and collect, analyze and interpret data. The assignments count towards the lab grade, and are also used for SLO 3 assessment. The assessment rubric is attached.

**Timeline** - – Ecology is offered every fall semester; assessment data will be collected and evaluated annually.