**Assessment Plan: GELOs in Biology Courses** 

PLNU General Education courses (BIO 101, 102, 103, 105, 210 & 211)

**PLNU General Education course (BIO 104)** 

**Learning Outcome:** GELO 1c. Information Literacy: Students will be able to access and cite information as well as evaluate the logic, validity, and relevance of information from a variety of sources. This outcome will be measured yearly via direct, summative assessment.

**Outcome Measure:** Signature Assignment: Multiple choice questions on the final exam taken from the Test of Scientific Literacy Skills (TOSLS). The whole class was assessed.

**Criteria for Success:** At least 60% of the students will answer the questions correctly (an average of 60% for all of the questions). 60% was chosen since this is an introductory course for non-science majors. Questions from the TOSLS were chosen that specifically addressed information literacy <u>and</u> were appropriate for the content of each course.

## **Longitudinal Data:**

	<b>SUMMER, 2018</b>		<b>SUMMER, 2017</b>	
Class	n	% of Students Answering	n	% of Students Answering
		TOSLS Questions Correctly		<b>TOSLS Questions</b>
		$(Ave \pm S.D.)$		Correctly (Ave $\pm$ S.D.)
BIO104	22	79 <u>+</u> 12	21	81 <u>+</u> 13

**Conclusions Drawn from Data:** The students in BIO104 are meeting the criteria for information literacy.

Changes to be Made Based on Data: We will continue to use these questions for summative assessment in our GE courses.

**Rubric:** Gormally, C., Brickman, P., and Lutz, M. "Developing a Test of Scientific Literacy Skills (TOSLS): Measuring Undergraduates' Evaluation of Scientific Information and Arguments." C.B. E. Life Science Education 11(4): 364–377 (2012).

BIO104: Questions 5, 9, 10, 17, 22, 27