

**Biology Department Assessment of Program Learning Outcomes
MS in General Biology
2015-2016**

Learning Outcome:

PLO #4: Distinguish between science and faith, and discuss the potential compatibility of the two domains.

Outcome Measure:

Indirect assessment: Alumni survey question

Direct assessment: Signature assignment added in 2015 to BIO 633 (History & Philosophy of Science)

Criteria for Success:

Indirect assessment: At least 80% of students will “strongly agree” that they are able to "Distinguish between science and faith, and discuss the potential compatibility of the two domains” as a result of the program.

Direct assessment: 80% of students will score at “developed” or higher for both rows on the rubric

Longitudinal Data:

Assessment	2014-2015	2015-2016
Alumni survey (Indirect)	35% strongly agreed with the statement 57% agreed with the statement	Data not collected this year*
BIO 633 Signature assignment (Direct) Explanation of the distinction between religious faith and science	Assignment did not exist	43% (n=14)
BIO 633 Signature assignment (Direct) Articulation of the possibility of a relationship and compatibility of the two domains	Assignment did not exist	86% (n=14)

*Since the Alumni survey is not conducted every year, there was no data collected in 2015-2016.

Conclusions Drawn from Data:

The direct assessment data provides evidence that most students (57%) did not provide a thorough description of the distinction between science and faith, and the criterion was not met. It is unclear if this is due to the signature assignment prompt or to a lack of understanding.

The direct assessment data provides evidence that the criterion was met for “articulation of the possibility of a relationship and compatibility of the two domains”, and 9/14 students were assessed as highly developed.

Changes to be Made Based on Data:

More emphasis will be made in BIO 633 to discuss the distinction between science and faith by comparing the types of evidence required in science, and how this relates to faith.

Rubric used:

BIO 633 Signature Assignment and Rubric for PLNU Graduate Biology program PLO#4

Signature assignment: In a 200-300 word essay, distinguish between science and faith, and discuss the potential compatibility of the two domains within the context of explanations for the diversity of life on earth.

Component	Initial (70%)	Emerging (80%)	Developed (90%)	Highly Developed (100%)
Explanation of the distinction between religious faith and science	Minimal or inaccurate description of both science and religious faith	Basic description of both science and religious faith	Good description of both science and religious faith	Excellent and thorough description of both science and religious faith
Articulation of the possibility of a relationship and compatibility of the two domains	Denies the possibility of a relationship/ intersection between religious faith and science	States ambivalence about the possibility of a relationship/ intersection between religious faith and science	Acknowledges the possibility of a relationship/ intersection between religious faith and science.	Fully embraces possibility of a relationship/ intersection between religious faith and science, and provides personal evidence of such a relationship