Graduate Biology Program Learning Outcomes

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1a.   Students will discuss major concepts and theories in biology.
1b.   Students will carry out and communicate experimental methods and data analysis used in biology.
1c.   Students will demonstrate knowledge and skills in critical thinking, such as analysis and synthesis, as applied to primary literature in the field of biology, as well as in science education.
2a.   Students will engage in ongoing scholarly and professional conversations regarding both the distinctions between and the compatibility of science and faith.
2b.   Students will participate in a community of scientists who model strong Christian values and spiritual development.
3a.   Students will serve as scholars within professional organizations.

Rubric for Graduate Biology program BIO611 final exam question related to PLO 1c

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	Far below standards (23 pts)	**Approaching standards (27 pts)**	**Meeting Standards (30 pts)**	**Exceeding Standards (33 pts)**
Effective use or written communication (1, 33%)	Writing is unclear, and either is too verbose or too brief. Frequent grammatical or typing errors.	Writing is unclear in some places. Occasional grammatical or typing errors.	Writing is clear and concise with no grammatical or typing errors.	Writing is clear and concise with no grammatical or typing errors. Writing is sophisticated with a high vocabulary level.
Analysis of alignment stated theoretical framework with data collection and analysis (1, 33%)	No critical analysis obvious in answer.	Attempt made to analyze paper, but makes mistakes in terms of consistency or accuracy in identifying the theoretical framework or its alignment with the methodology.	Analysis includes accurately identifying the theoretical framework, and includes relevant comments as to the alignment or lack thereof with the methodology.	Thorough analysis that goes beyond "Meeting standards" by providing a sophisticated critique indicating a deep understanding of the issues.
Use of examples to support analysis (1, 33%)	No examples or poorly chosen examples used to support analysis of the paper	Some examples are used, but may be too brief or too long. No clear connections between the examples and the analysis.	Pertinent examples used to support analysis of the paper, and examples are clearly connected to the analysis.	Pertinent examples are used, with excellent explanations in terms of how the examples illustrate the agreement between theory and methodology.