Student Learning Outcome (SLO) #3: Apply skills in critical analysis and reasoning for the interpretation of data.

Definition: Critical thinking and reasoning are habits of mind characterized by the exploration of issues, artifacts, and events based on quantitative or qualitative data before accepting or formulating an opinion or conclusion.

This SLO is met in the following General Education categories: **Category B – Understanding Self and Others** – Courses in this category explore self-reflection and human interaction as they relate to understanding our world and ourselves. Specifically, they focus on the influence of culture and the role of the individual on the understanding of the development, achievements, behavior, organization, or distribution of humanity, and **Category C – Understanding Science and Technology** – Courses in this category describe and understand the physical and natural world by employing or understanding scientific method in analyzing situations, problems, or discoveries. They also model with mathematics, construct viable arguments, use appropriate tools strategically, and attain conceptual understanding. Additionally, it may use procedural skills, and reason abstractly and quantitatively. Courses explore technology in ways to understand these concepts.

Performance Level Ratings

Skill	4 (Excellent)	3 (Good)	2 (Fair)	1 (Poor)
Understands assumptions/context related to the problem	Clearly understands the assumptions/context related to the problem.	Generally understands the assumptions/context related to the problem.	Partially understands the assumptions/context related to the problem.	Lacks a clear understanding of the assumptions/context related to the problem.
Identifies appropriate data to address the problem	Clearly identifies the appropriate data to solve the problem	Generally identifies the appropriate data to solve the problem	Partially identifies the appropriate data to solve the problem	Does not clearly identify the appropriate data to solve the problem
Identifies appropriate analysis of the data to address the problem	Identifies a clear and appropriate analysis for the data.	Identifies a generally appropriate analysis for the data.	Identifies a partially appropriate analysis for the data.	Lacks a clear and appropriate analysis for the data.

Skill	4 (Excellent)	3 (Good)	2 (Fair)	1 (Poor)
Interpretation/conclusion reached is based on data and its analysis	Interpretation/ conclusion is clear and logical, reflecting the student's informed evaluation and ability to critically analyze data.	Interpretation/ conclusion is logically tied to a broad range of data critically presented.	Interpretation/conclusion is logically tied to a limited range of data with some critical analysis presented.	Interpretation/ conclusion is inconsistently tied to some data with little critical analysis presented.

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