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 data before accepting or formulating an opinion or conclusion.

This SLO is met in the following General Education categories: 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, **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 Levels			
	4	**3**	**2**	**1**
Student output and quality of work	• Problem is clearly stated and delivers all information necessary for full understanding • Information taken from sources has been adequately interpreted and synthesized • Viewpoints of experts are questioned thoroughly • Systematically analyzes assumptions and carefully evaluates the relevance of contexts when presenting a position • Specific position is imaginative; complexities and limits of position are acknowledged • Conclusions are logical and reflect student's informed evaluation and ability to place evidence • Successfully completes a research project and displays an ability to independently conduct a systematic process of inquiry	• Problem is stated and clarified so that omissions do not impede process • Information taken from sources is interpreted and evaluated for coherent analysis • Viewpoints of experts are subject to some questioning • Assumptions are identified when presenting a position • Specific position takes into account the complexities of an issue; others' points of view are acknowledged • Conclusions are logically tied to broad range of information • Successfully completes a project and displays an ability to conduct a systematic process of inquiry	• Problem is stated but description is a little unclear • Information taken from sources with some interpretation, but not enough for deep analysis or synthesis • Viewpoints from experts are taken more or less as fact; little to no questioning • Becomes aware of some assumptions • Specific position acknowledges different sides of an issue • Conclusion is logically tied to a limited range of information; some implications are identified • Needs guidance in designing a systematic process of inquiry and procedure of analysis to answer these questions	• Problem is stated without clarification or description • Information is taken from sources as literal without any interpretation • Viewpoints of experts are taken as fact; no questioning • Begins to become aware of assumptions • Specific position is stated but it is biased and simple • Conclusion is inconsistently tied to some information; implications are not identified • Lacks general knowledge of systematic process of inquiry and analysis