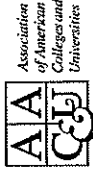


Goal statements for Problem Solving/Critical Thinking area

Critical Thinking: Students who complete the requirement in Critical Thinking will be better able to explore issues and events before accepting or formulating opinions or conclusions about them.

Problem solving: Students who finish the Problem Solving requirement of General Education will develop the ability to tackle complex issues or open-ended questions and design possible solutions to them based on relevant information, including mathematical and computational data when possible.



CRITICAL THINKING VALUE RUBRIC

for more information, please contact valuel@aacu.org

Definition

Critical thinking is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion.

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmarks (all one) level performance.

	Capstone 4	3	Milestones 2	Benchmark 1
Explanation of issues	Issue/ problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding	Issue/ problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/ problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/ or backgrounds unknown.	Issue/ problem to be considered critically is stated without clarification or description.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little questioning	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.
Influence of context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.
Student's position (perspective, thesis/hypothesis)	Specific position (perspective, thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
Conclusions and related outcomes (implications and consequences)	Conclusions and related outcomes (consequences and implications) are logical and reflect student's informed evaluation and ability to place evidence and perspectives discussed in priority order.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.

Hybrid Problem Solving rubric—incorporating quantitative information

	4	3	2	1
Define Problem	Student shows complete understanding of the problem including relevant contextual factors and understands fully any relevant quantitative information that will be needed to solve problem	Student shows strong understanding of the problem which identifies many contextual factors and sees that some quantitative information that will be relevant to solve problem	Student shows partially developed understanding of the problem including a few contextual factors and attempts to identify what quantitative information will be needed to solve the problem	Student shows limited understanding of the problem and contextual factors and fails to identify sufficiently what quantitative information will be needed to solve the problem
Identify strategies	Student devises effective and efficient approaches to solving the problem and defines fully the quantitative methodologies that will be brought to bear on the problem. Considers other possible approaches as well.	Student devises an approach to solving the problem and proposes an accurate quantitative methodology that will be brought to bear on the problem. Some consideration of alternative approaches is evidenced.	Students devise an approach to solving the problem but does not apply sufficient or accurate quantitative methodology to the problem. Little if any consideration of other approaches are evidenced.	Students devise an approach to solving the problem is flawed or inappropriate, and does not adequately apply accurate quantitative methodology to the problem. No consideration of other approaches are evidenced.
Generating Solutions	Student seeks to solve problem in an orderly and logical manner, producing quantitative results that are both accurate and on point with the problem at hand.	Student seeks to solve problem in an orderly manner, producing quantitative results that may have bearing on the problem at hand.	Student procedures for solving problem are flawed, quantitative results generated are accurate but not germane to the problem at hand.	Student approach to problem is insufficient or severely flawed, any quantitative results generated are inaccurate or not germane to the problem at hand.
Evaluating outcomes	Student can verbally describe the outcome and justify it rationally given the quantitative results discovered; can discern and describe any potential flaws in the outcome given variables in quantitative or other information used in the solution. Is convinced approach was correct.	Student can verbally provide a rationale for the outcome given the quantitative results; considers potential flaws in the outcome given variables in quantitative or other information used in the solution. Is confident approach has merit.	Student accepts result uncritically or cannot explain results fully; does not identify any potential flaws in the outcome given variables in information or errors in judgment or approach.	Student does not reflect on the result at all, cannot explain result in the context of the problem; does not consider potential flaws in the outcome given variables in information and errors in student judgment or approach.