

Analytic Reasoning



Each General Education category is grounded in a set of learning outcomes. For the full set of learning outcomes for Analytic Reasoning courses see: www.gened.umd.edu

This rubric is designed as a tool to assess activities aimed at student gains in the follow learning outcome(s) for the Analytic Reasoning General Education Category:

At the completion of this course, students will be able to:

- *Demonstrate proficient application of the skills required by the Mathematics Fundamental Studies requirement, including the ability to communicate using formal or mathematical tools.*
- *Distinguish between premises and conclusions or between data and inferences from data.*
- *Understand the differences among appropriate and inappropriate analytical methods for drawing conclusions.*
- *Apply appropriate analytical methods to evaluate inferences and to reason about complex information.*
- *Systematically evaluate evidence for accuracy, limitations, and relevance, and identify alternative interpretations of evidence.*
- *Use formal, analytical, or computational techniques to address problems.*

Criterion for review of student work	Descriptions of levels of student performance			
	Advanced	Proficient	Beginning	Unacceptable
Methods	Correctly identifies all aspects of the problem and demonstrates full understanding of subtleties and nuances embedded in the problem. Selects and uses appropriate methods, equations, formulas, or models, and has no errors. All elements of the methodology or theoretical framework are skillfully employed.	Correctly identifies all aspects of the problem and displays recognition of subtleties and nuances embedded in the problem. Selects and uses appropriate methods, equations, formulas, or models, and has no significant errors. All elements of the methodology or theoretical framework are employed.	Correctly identifies most key aspects of the problem. Selects and uses appropriate methods, equations, formulas, or models; has only a few significant errors. Essential elements of the methodology or theoretical framework are employed.	Does not correctly identify key aspects of the problem. Selects and uses incorrect methods, equations, formulas, or models, or has significant errors. Essential elements of the methodology or theoretical framework are missing.
Information (Evidence, Data...)	Fully determines what information is or is not pertinent. Distinguishes between supported claims and unsupported ones, fact from opinion. Recognizes ways in which the information might be limited or compromised. Skillfully handles contradictory, inadequate or ambiguous information.	Fully determines what information is or is not pertinent. Distinguishes between supported claims and unsupported ones, fact from opinion. Recognizes ways in which the information might be limited or compromised. Acknowledges contradictory, inadequate or ambiguous information.	Partially determines what information is or is not pertinent. Distinguishes between supported claims and unsupported ones, fact from opinion. Partially recognizes ways in which the information might be limited or compromised. Partially acknowledges contradictory, inadequate or ambiguous information.	Does not determine what information is or is not pertinent. Does not distinguish between supported claims and unsupported ones, fact from opinion. Does not recognize ways in which the information might be limited or compromised. Does not acknowledge contradictory, inadequate or ambiguous information.

Interpretation	<p>Constructs cogent arguments rooted in data/information.</p> <p>Shows sophisticated sensitivity to potential biases in the evidence that influence the conclusion.</p> <p>Identifies gaps in the evidence and suggests additional information that might resolve the issue.</p> <p>States a conclusion that is logically sound.</p>	<p>Constructs cogent arguments rooted in data/information.</p> <p>Shows sensitivity to potential biases in the evidence that influence the conclusion.</p> <p>Identifies gaps in the evidence.</p> <p>States a conclusion that is logically sound.</p>	<p>Constructs arguments mostly rooted in data/information.</p> <p>Identifies gaps in the evidence.</p> <p>States a conclusion imperfectly obtained from arguments.</p>	<p>Does not construct arguments rooted in data/information.</p> <p>States a conclusion unsupported by arguments.</p>
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The Analytic Reasoning Rubric was developed by the Analytic Reasoning Faculty Board, supported by the Office of Undergraduate Studies and the Office of Institutional Research, Planning, and Assessment with the Analytic Reasoning instructors upon review of the AAC&U VALUE rubrics and according to standards determined by the Analytic Reasoning Faculty Board for student performance in the General Education Analytic Reasoning courses. The rubric defines the standards for student performance in Analytic Reasoning courses at the University of Maryland.