

Rationale and Definition of the Five Liberal Arts Learning Outcomes

The five learning outcomes identified and defined below focus on a range of skills that are central to the ways that thoughtful, liberally educated people approach the world. They cut across disciplines—creativity is not only for artists, but for scientists and social workers as well; quantitative literacy is for poets as well as statisticians. Developing these skills prepares all Eastern students, regardless of major, to face complexity and ambiguity in the many domains they will confront after graduation.

Critical Thinking

Rationale: Liberally educated students are curious and reflective. By practicing critical thinking skills, students develop the habits of questioning, evaluating, and forming educated judgments in preparation for the challenges of personal and professional lives. Critical thinking relates to nearly all situations, careers, environments, and opportunities.

Definition: Critical thinking is the analysis and evaluation of complex ideas, artifacts, information, and arguments as a basis for formulating a well-reasoned belief, judgment, or conclusion.

Upon completion of the LAC Curriculum, Eastern students will be able to demonstrate critical thinking by:

- Identifying and stating a problem or issue to be addressed;
- Analyzing and evaluating complex ideas, artifacts, information, and arguments that can address the problem or issue;
- Stating and assessing the assumptions and limitations of ideas, artifacts, information, and arguments that can address the problem or issue; and
- Formulating well-reasoned beliefs, judgments, or conclusions.

Critical Thinking can be assessed by measuring levels of issue identification, evidence, context and assumptions, analysis, and conclusions when analyzing complex problems or issues.

Identification: ability to articulate the issue/problem to be considered

Evidence: ability to select and use ideas, artifacts, information, or arguments to investigate a problem or issue

Context and Assumptions: ability to examine one's own and others' assumptions and their relevance to the problem or issue

Analysis: ability to organize and synthesize ideas, artifacts, information, or arguments in a way that allows an issue or problem to be evaluated

Conclusions: ability to formulate a belief, judgment, or conclusion based on analysis of ideas, artifacts, information, or arguments, including implications and/or limitations

Ethical Reasoning

Rationale: Liberally educated students carefully consider how decisions and behaviors affect individuals, communities, and the world. In an increasingly complex and globalized society, it is imperative to contemplate the impact that human actions have on others and to recognize and weigh the ethical implications of different courses of action in life and work.

Definition: Ethical Reasoning requires students to recognize ethical issues, identify their own ethical positions and analyze other ethical perspectives in real-world situations in order to consider the impact of decisions and actions on other individuals, society, and the environment.

Upon completion of the LAC Curriculum, Eastern students will be able to demonstrate ethical reasoning by:

- Recognizing ethical issues;
- Identifying their own ethical positions;
- Analyzing other ethical positions; and
- Considering the impact of decisions and actions on other individuals, society, and the environment.

Ethical reasoning can be assessed by measuring levels of recognition of ethical issues, ethical self-awareness, awareness of other ethical positions, evaluation of different ethical perspectives, and an application of ethical perspectives to real world situations.

Recognition of ethical issues—ability to identify a decision that has implications for others as well as their complexities and interrelationships

Ethical self-awareness— ability to analyze and discuss one’s own core beliefs and their origins

Awareness of other ethical positions— ability to understand and communicate other ethical perspectives and their origins

Evaluation of different ethical perspectives—ability to state an ethical position and reasonably defend it through analysis of multiple factors including considering other ethical positions and objections, assumptions and limitations of an ethical position

Application of ethical perspectives to real world situations—ability to logically apply ethical perspectives to a real-world situation through support of the position and analysis of implications of the position

Communication

Rationale: Liberally educated students convey their ideas in compelling ways to others. Effective communication involves expressing oneself clearly, accurately, and in a manner suited to the audience and occasion. Effective communication is an essential professional skill.

Definition: Communication requires students to recognize and utilize the most appropriate means to address specific audiences in relevant contexts or genres in order to effectively inform or persuade.

Upon completion of the LAC Curriculum, Eastern students will exhibit communication skills by:

- Recognizing and utilizing the most appropriate means to address specific audiences; and
- Employing communication methods relevant to specific contexts or genres to effectively inform or persuade.

Communication can be assessed by measuring levels of abilities to recognize the context and purpose of the work, use the assigned medium skillfully, apply appropriate conventions, develop compelling content, and organize content effectively.

Context and purpose: Ability to recognize the target audience, the goals or purpose of the communication, and the context in which the communication is occurring.

Use of medium: Ability to use the medium in a manner that communicates the intended meaning with clarity, concision, fluency, and without errors.

Appropriate conventions: Ability to demonstrate mastery of the conventions of the genre or discipline, including presentation, formatting, and stylistic choices.

Content Development: Ability to select or create content that is relevant and demonstrates mastery of the subject.

Content Organization: Ability to fully explore, synthesize, and develop ideas, and communicate ideas with a structured, logical, and/or intuitive flow.

Creativity

Rationale: Liberally educated students adapt and innovate in our rapidly changing world. Although creativity is often associated with the arts, innovative thought and expression are used across the disciplines and in various work situations. The capacity to see new possibilities and to make things that did not exist before is a valuable skill for various fields.

Definition: Creativity is the ability to utilize skills and strategies to synthesize ideas, perspectives, information, or materials in original and self-aware ways, and to use that synthesis to generate imaginative acts or products.

Upon completion of the LAC Curriculum, Eastern students will be able to demonstrate Creativity by:

- Utilizing newly acquired strategies and skills within a creative domain;
- Synthesizing ideas, perspectives, information, or materials in original ways;
- Creating an imaginative act or product with new ideas, perspectives, information, and materials; and
- Evaluating the role of their own values, interests, and ideas in the creative process and act or product.

Creativity can be assessed by measuring the acquisition of basic competencies, innovative thinking, the execution of the creative process through a final imaginative act or product, and reflexive awareness.

Acquiring Competencies - ability to utilize strategies and skills within a creative domain

Innovative Thinking (Planning) - ability to synthesize existing ideas or perspectives in new or unique ways while introducing new materials and forms, tackling controversial topics, and/or offering unconventional ideas or solutions in the creative process

Execution of Creativity (Act or Product) - ability to thoroughly apply basic competencies and innovative thinking in throughout an imaginative act or product

Reflexive Awareness - ability to evaluate how one's individual perspectives informed and influenced the creative process and product within the confines of the discipline

Quantitative Literacy

Rationale: Liberally educated students understand, reason with, and communicate quantitative information in a wide variety of contexts and everyday situations. In today's technological and data-driven society there is an ever-increasing demand, across disciplines and careers, for the ability to work with quantitative information of all types.

Definition: Quantitative literacy is competency in working with numerical data to reason or solve problems, the ability to make judgements and draws conclusions supported by quantitative evidence, and the ability to communicate those arguments utilizing quantitative tools.

Upon completion of the LAC Curriculum, Eastern students will be able to demonstrate quantitative literacy by:

- Interpreting and explaining information presented in quantitative forms (e.g. equations, graphs, diagrams, tables);
- Converting information into quantitative forms when required;
- Creating arguments and arriving at judgments based on quantitative analysis of data; and
- Expressing quantitative evidence in support of arguments

Quantitative literacy can be assessed by measuring levels of interpretation, representation, application/analysis, assumptions, and communication of quantitative information

Interpretation - ability to explain information presented in quantitative forms (e.g., equations, graphs, diagrams, tables)

Representation - ability to convert relevant information into various quantitative forms (e.g., equations, graphs, diagrams, tables)

Application/analysis - ability to make judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis

Assumptions - ability to make and evaluate important assumptions in estimation, modeling, and data analysis

Communication – ability to express quantitative evidence in support of the argument or purpose of the work (in terms of what evidence is used and how it is formatted, presented, and contextualized)

Learning Outcome Rubrics

Critical Thinking Rubric

Assessment Category	Capstone	Milestones		Benchmark	Below Benchmark
	4	3	2	1	0
Issue Identification	States and describes issue/problem clearly and comprehensively .	States, describes, and clarifies issues/problem effectively with only minor omissions .	States issues/problem but description leaves some concepts undefined or ambiguous .	States issues/problem without clarification or description .	Does not state the issues/problem.
Evidence	Ideas, artifacts, information, or arguments taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis.	Ideas, artifacts, information, or arguments taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis.	Ideas, artifacts, information, or arguments taken from source(s) with some interpretation/evaluation , but not enough to develop a coherent analysis or synthesis.	Ideas, artifacts, information, or arguments taken from source(s) without any interpretation/evaluation .	Does not articulate ideas, artifacts, information, or arguments.
Context and Assumptions	Systematically and methodically analyzes one's own and others' assumptions and carefully evaluates the relevance of context when presenting a position.	Identifies one's own and others' assumptions and presents relevant context when presenting a position.	Questions some assumptions and identifies several relevant contexts when presenting a position.	Emerging awareness of some assumptions with limited identification of context when presenting a position.	Does not demonstrate awareness of assumptions and/or context.
Analysis	Organizes and synthesizes ideas, artifacts, information, or arguments to discover insights about the issue/problem.	Organizes ideas, artifacts, information, or arguments to effectively address the issue/problem .	Lists ideas, artifacts, information, or arguments with some organization .	Lists ideas, artifacts, information, or arguments, but they are unorganized and/or unfocused .	Does not list ideas, artifacts, information, or arguments.
Conclusions	States a conclusion that is logical and reflective of informed analysis and presents well-reasoned beliefs and judgements discussed in priority order .	States a conclusion focused solely on analysis , and related beliefs and judgements are clearly identified.	States a general conclusion based on the analysis and some related beliefs and judgements are clearly identified .	States ambiguous, illogical, or unsupported conclusions , and related beliefs and judgments are oversimplified .	Does not state conclusions, beliefs, and/or judgements.

Ethical Reasoning Rubric

Assessment Category	Capstone	Milestones		Benchmark	Below Benchmark
	4	3	2	1	0
Ethical Issue Recognition	Recognizes ethical issues when presented in a complex, multilayered context <u>and</u> recognizes interrelationships among the issues.	Recognizes ethical issues when issues are presented in a complex, multi-layered context <u>or</u> grasps interrelationships among the issues.	Recognizes basic and obvious ethical issues and grasps (incompletely) the complexities or interrelationships among issues.	Recognizes basic and obvious ethical issues but does not articulate complexities or interrelationships.	Does not recognize basic and obvious ethical issues.
Ethical Self-Awareness	Discusses in detail/ analyzes both one's own core beliefs (conscious and unconscious) as well as their origins and engages in a clear and thoughtful discussion of these beliefs.	Discusses in detail / analyzes both their core beliefs and the origins of these beliefs.	States both core beliefs and the origins of these beliefs.	States their core beliefs or articulates the origins but not both.	Does not state either their core beliefs or their origins.
Awareness of Other Ethical Positions	Discusses in detail/ analyzes other ethical positions as well as their origins and engages in a clear and thoughtful discussion of these beliefs.	Discusses in detail/ analyzes other ethical positions and the origins of these beliefs.	States other ethical positions and the origins of these beliefs.	States other ethical positions or articulates the origins of these beliefs but not both .	Does not state other ethical positions or articulate their origins.
Evaluation of Different Ethical Perspectives	States a position and can adequately and effectively defend a position by addressing objections, assumptions, and limitations of the chosen ethical perspectives and effectively rebuts those considerations .	States a position and can state the objections, assumptions, and limitations of a chosen ethical perspective, but does not adequately address these considerations.	States a position and can state the objections to, assumptions, and limitations of a chosen ethical perspective but does not address them .	States a position but does not state the objections to and assumptions and limitations of a chosen ethical perspective.	Does not state an ethical position.
Application of Ethical Perspectives to Real World Situations	Independently and accurately applies ethical perspectives to a real-world situation and considers full implications of the application.	Independently and accurately applies ethical perspectives to a real-world situation, but the analysis lacks specificity regarding the implications.	Independently applies ethical perspectives to real world situation, but the application is inaccurate or illogical .	Applies ethical perspectives to a real-world situation with support but does not independently apply ethical perspectives.	Does not apply ethical perspectives to a real-world situation.

Communication Rubric

Assessment Category	Capstone 4	Milestones		Benchmark 1	Below Benchmark 0
		3	2		
Context and Purpose	Demonstrates a thorough understanding of context, audience, and purpose.	Demonstrates an adequate understanding of context, audience, and purpose.	Demonstrates some understanding of context, audience, and purpose.	Demonstrates minimal understanding of context, audience, and purpose.	Does not demonstrate understanding of context, audience, and purpose.
Use of Medium	Uses medium in an elegant way that skillfully communicates meaning to the audience with clarity, concision, and fluency, and without errors.	Uses medium in a straightforward way that communicates meaning to the audience with adequate clarity, concision, and fluency, and with minimal errors.	Uses medium in a way that generally communicates meaning to the audience, but may be lacking in clarity, concision or fluency, or may include errors.	Uses medium in a way that sometimes impedes meaning because of errors in usage.	Does not use medium in a way that communicates meaning.
Appropriate Conventions	Demonstrates mastery of all conventions of presentation, formatting, and stylistic choices.	Demonstrates consistent use of a wide range of conventions of presentation, formatting, and stylistic choices.	Demonstrates use of most conventions of presentation, formatting, and stylistic choices.	Demonstrates use of some conventions of presentation, formatting, and stylistic choices.	Does not use conventions of presentation, formatting, and stylistic choices.
Content Development	Uses appropriate, relevant, and compelling content to illustrate mastery of the subject.	Uses appropriate and relevant content to illustrate good understanding of the subject.	Uses content to illustrate adequate understanding of the subject.	Uses content to illustrate some understanding of the subject.	Does not illustrate understanding of the subject.
Content Organization	Ideas are fully explored, synthesized, and developed, and are clearly structured and follow a logical or intuitive flow.	Ideas are fully explored and somewhat synthesized and developed, and are structured and largely follow a logical or intuitive flow.	Ideas are explored but not synthesized and developed, and some structure is evident but at times does not follow a logical or intuitive flow.	Ideas are not fully explored, there is no evidence of synthesis or development, and structure or logical/intuitive flow is deficient.	Ideas are not explored or developed, and a structured or logical/intuitive flow is absent.

Creativity Rubric

Assessment Category	Capstone 4	Milestones		Benchmark 1	Below Benchmark 0
		3	2		
Acquiring Competencies	Demonstrates mastery of basic technical skills.	Demonstrates proficiency in basic technical skills.	Demonstrates emerging proficiency in basic technical skills.	Demonstrates minimal proficiency in basic technical skills.	Does not demonstrate minimal proficiency in basic technical skills.
Innovative Thinking (Planning)	Transforms existing approaches while actively seeking out and following through on untested and potentially risky directions or approaches to the assignment guidelines.	Imitates existing approaches while incorporating novel directions or approaches to the assignment guidelines.	Evaluates the appropriateness of various existing approaches for meeting the guidelines of the assignment; considers new directions or approaches.	Recognizes existing approaches while meeting the guidelines of the assignment.	Does not recognize existing approaches or meet the guidelines of the assignment.
Executing Creativity (Product)	Consistently applies basic skills and innovative thinking throughout the imaginative product.	Often applies skills and innovative thinking throughout the imaginative product.	Occasionally applies skills and innovative thinking throughout the imaginative product.	Inconsistently applies skills and innovative thinking throughout the imaginative product.	Does not apply skills or innovative thinking throughout the imaginative product.
Reflexive Awareness	Identifies the origination of ideas, obstacles, and challenges and thoroughly examines the role of the student's values, interests, and experiences in the creative process and product.	Identifies the origination of ideas, obstacles, and challenges and examines the role of the student's values, interests, and experiences in the creative process.	Identifies the origination of ideas, obstacles, and challenges and articulates the role of the student's values, interests, and experiences in the creative process.	Identifies a basic timeline of each stage in creative process with a limited articulation of the role of the student's values, interests, and experiences in the creative process.	Does not identify the stages of the creative process or the role of the student's values, interests, and experiences in the creative process.

Quantitative Literacy Rubric

Assessment Category	Capstone	Milestones		Benchmark	Below Benchmark
	4	3	2	1	0
Interpretation	Provides accurate explanations of information presented in quantitative forms and makes appropriate inferences based on that information.	Provides accurate explanations of information presented in quantitative forms.	Provides somewhat accurate explanations of information presented in quantitative forms, but occasionally makes minor errors.	Attempts to explain information presented in quantitative forms but draws incorrect conclusions about what the information means.	Does not attempt to explain information presented in quantitative forms
Representation	Skillfully converts relevant information into an insightful quantitative portrayal in a way that contributes to a further or deeper understanding.	Competently converts relevant information into an appropriate and desired quantitative portrayal.	Completes conversion of information but resulting quantitative portrayal is only partially appropriate or accurate.	Completes conversion of information but resulting quantitative portrayal is inappropriate or inaccurate.	Does not complete conversion of information.
Application/ Analysis	Uses the quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions.	Uses quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions.	Uses quantitative analysis of data as the basis for basic judgments, drawing plausible conclusions.	Uses quantitative analysis of data as the basis for tentative judgments with hesitant or uncertain conclusions.	Does not use quantitative analysis of data as the basis for tentative judgments.
Assumptions	Explicitly describes assumptions and provides compelling rationale for why each assumption is appropriate and shows awareness that confidence in final conclusions is limited by the accuracy of the assumptions.	Explicitly describes assumptions and provides compelling rationale for why assumptions are appropriate.	Explicitly describes assumptions.	Attempts to describe assumptions.	Does not attempt to describe assumptions.
Communication	Uses quantitative information in connection with the argument or purpose of the work, presents it in an effective format, with consistently high quality.	Uses quantitative information in connection with the argument or purpose of the work, though data may be presented in a less effective format.	Uses quantitative information but does not effectively connect it to the argument or purpose of the work.	Presents an argument for which quantitative evidence is pertinent but provides inadequate quantitative support.	Does not present an argument for which quantitative evidence is pertinent.