General Education Assessment Plan
2014-2019

Committee on Undergraduate Education
Office of the Provost

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Introduction

The Cedar Crest College baccalaureate curriculum provides students with the knowledge and skills to sustain a life of learning in the liberal-arts tradition and to succeed in their professional, civic, and personal ambitions.

Students emerge from a Cedar Crest education as leaders able to reason creatively within distinct-yet-interwoven fields of learning, to engage civically in diverse and globally connected communities, and to adapt professionally with the skills and values they will need to achieve lifetime goals. The baccalaureate education is thus the keystone of the college mission:

Cedar Crest College is a liberal arts college for women dedicated to the education of the next generation of leaders. Cedar Crest College educates the whole student, preparing women for life in a global community.

General education at Cedar Crest College refers to the essential knowledge and abilities that students demonstrate in satisfying the breadth of learning in the Liberal Arts Curriculum and how such core competencies are developed through the disciplinary depth of a major course of academic study.

This General Education Assessment Plan evaluates the effectiveness, coherence, and rigor of the Cedar Crest College curriculum in providing student learning experiences that cultivate such essential knowledge and skills. Our assessment process evaluates authentic student work completed as part of Cedar Crest College coursework, and we measure performance based upon modified VALUE rubrics (Valid Assessment of Learning in Undergraduate Education) from the Association of American Colleges & Universities (AAC&U).

Assessment consists of the following elements each year:

- Comprehensive analysis of the College’s Liberal Arts Curriculum (LAC) outcomes through student performance in LAC-designated courses;
- Comprehensive analysis of upper-level General Education Skills (GES) through student performance in capstone courses for major programs of study; and
- Focused calibration and analysis throughout the LAC and major-specific curricula in the following key areas of student learning by academic year:
  - Information Literacy (2014-2015)
  - Oral Communication (2015-2016)
  - Quantitative Reasoning (2017-2018) and Technological Competency (2017-2018)
  - Written Communication (2018-2019)

By the end of each academic year, the assessment process makes annual recommendations and revisions to provide for continuous improvement of student learning in the Cedar Crest undergraduate curriculum. A culminating report will review the assessment cycle in full in 2019.
Goals of General Education Assessment

Our general education assessment process has the following goals for the five-year cycle between 2014 and 2019:

- Document and evaluate evidence, from direct and indirect measures, of the effectiveness of general education in the Cedar Crest College baccalaureate curriculum.
- Recommend and enact improvements to pedagogy, the Liberal Arts Curriculum, and the curricula for major programs of baccalaureate study so as to strengthen the effectiveness, coherence, and rigor in student learning experiences for general education.
- Identify student performance benchmarks in general education appropriate to level of undergraduate study—from first to final year—in introductory (100-level), intermediate (200-level), and advanced (300-level & 400-level) courses.
- Recommend pedagogical approaches and student learning experiences, such as example assignments, by level of undergraduate study that are effective at improving general education in a) critical and creative reasoning, b) scientific and quantitative reasoning, c) information literacy, d) technological competency, e) written communication, and f) oral communication.
- Provide professional development opportunities for faculty and academic support staff to improve the teaching of general education knowledge and skills.
- Evaluate Cedar Crest College general education data in the context of how students at other institutions perform in comparable VALUE assessments, such as through the AAC&U’s GEMs initiative (General Education Maps and Markers).
- Communicate the results of general education assessment to the faculty, academic support staff, the Board of Trustees, and other Cedar Crest College stakeholders.
General Education at Cedar Crest College

The Cedar Crest College undergraduate curriculum provides for the following student learning outcomes so that all baccalaureate graduates, at time of degree completion, shall have demonstrated the abilities to:

- engage in critical analysis and qualitative reasoning,
- engage in scientific and quantitative reasoning,
- evaluate and utilize technological and informational resources appropriately, so as to show technological competency and information literacy,
- communicate clearly, both orally and through the written word,
- participate in and appreciate artistic and creative endeavors,
- understand and articulate the foundations of their own ethics and values, as well as understand the value systems of others, and
- understand and respond to issues of local, national, and global significance.

The Liberal Arts Curriculum (40-43 credits) lays a foundation for these outcomes through study in five disciplinary areas of scholarly and artistic achievement (Arts, Humanities, Mathematics and Logic, Natural Sciences, & Social Sciences), two areas of civic engagement (Ethics and Global Studies), and two levels of scholarly writing (curricular-wide and discipline-specific). College-wide study of technological competence, oral presentation, and information literacy is specified in curricula for each major program of baccalaureate study.

Academic majors continue to develop these general-education skills through curricula that realize the mission and learning outcomes of a specific Bachelor of Arts or Bachelor of Science degree program.

A fundamental premise of liberal-arts learning is that key elements of general education share an inherent interrelationship with one another. Information literacy, for instance, cannot be understood as distinct from the reasoning, communication, and technology skills that enable students to identify sources of information, assess their value, and use them to answer questions they have.

Our General Education Assessment thus evaluates and strengthens the relationship between courses in the Liberal Arts Curriculum and those serving academic majors, but it also improves the coherence among key general education skills.
Methods of Assessment

Cedar Crest College’s primary direct measures for General Education Assessment draw upon authentic student work created as part of baccalaureate-level coursework, as opposed to external standardized testing instruments completed outside the curriculum. Additional direct measures may include standardized instruments that supplement such authentic measures, as with external major-field tests or certification exams whose results include general-education data pertaining to major programs of study. Indirect measures include surveys of current students, graduating students, and college alumnae.

Our primary assessment measures align with the Association of American Colleges & Universities VALUE project (Valid Assessment of Learning in Undergraduate Education). VALUE is part of the AAC&U LEAP initiative (Liberal Education and America’s Promise), which articulates a series of Essential Learning Outcomes in college study so as to establish a benchmark for national advocacy of liberal education. The AAC&U’s associated effort GEMs (General Education Maps and Markers), begun in December 2013, seeks to present a proficiency-based analysis of Essential Learning Outcomes across integrated levels of student learning. When comparative data from higher-education institutions using the VALUE system become broadly available, as with the VALUE I Database Platform, Cedar Crest College will evaluate its local assessment in the context of such national peers.

The VALUE system establishes sixteen rubrics for faculty to measure student proficiency according to the LEAP Essential Learning Outcomes. The below VALUE rubrics are in use at Cedar Crest College to measure general education proficiency, and others may be adopted as assessment needs require:

<table>
<thead>
<tr>
<th>Creative Thinking</th>
<th>Critical Thinking</th>
<th>Ethical Reasoning</th>
<th>Global Learning</th>
<th>Information Literacy</th>
<th>Inquiry &amp; Analysis</th>
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</table>

Each VALUE rubric measures proficiency according to four levels of undergraduate learning, from entry-level first-year expectations (1 or “Benchmark”) through two levels of “milestone” progression (2 or 3) and finally graduating-level proficiency (4 or “Capstone”). Students may also demonstrate developmental proficiency for below entry-level expectations (0 or developmental).
Compilation of annual data for the Liberal Arts Curriculum initiative, capstone-level General Education Skills initiative, and Focused Student Learning Outcomes will be coordinated by the Committee on Undergraduate Education and the Office of the Provost.

The Liberal Arts Curriculum assessment identifies, each year, course offerings designated by LAC categories (e.g. Arts, Humanities, Mathematics and Logic) and collects pertinent rubric scores based upon the instructor review of an assignment or related series of assignments completed by individual students within the course. Courses for LAC major-embedded general education requirements (MGE)—technology, oral presentation, and information literacy—are identified based upon program curriculum maps and review by department chairs.

The General Education Skills initiative, which assesses junior- and senior-level student proficiency, collects rubric scores for six general-education student learning outcomes: Critical and Creative Reasoning, Information Literacy, Oral Communication, Quantitative Reasoning, Technological Competency, and Written Communication. Scores are gathered from the capstone courses of academic majors, which are identified by program curriculum maps and review by department chairs. Scores are based upon instructor-of-record evaluation of an assignment or related series of assignments completed within the capstone course by individual students.

The Focused Student Learning Outcomes initiative identifies a deep range of courses that address the general-education SLO being addressed each year, including courses part of the LAC and GES data collection and other courses from various levels of undergraduate study. In the fall semester, the Committee on Undergraduate Education (CUE) reviews the associated VALUE rubric, establishes a common anchor set of student work, and collects a sample set of student work for rubric calibration by the Cedar Crest College faculty. At the January faculty workshop, CUE and the Office of the Provost facilitates a calibration among the faculty for the targeted SLO, coordinates a review of the student-work sample set, and receives faculty feedback on expected proficiency by Cedar Crest students at levels of undergraduate study. Validity and inter-rater reliability scores will be tracked as part of this calibration process. Evaluation of each year’s targeted Student Learning Outcome will include how a particular skill interrelates to other general education competencies.

The Committee on Undergraduate Education reviews compiled assessment data from the LAC, GES, and FSLO initiatives in the spring semester to make and enact changes to undergraduate curriculum and teaching practice that improve the student general-education learning experience at Cedar Crest College.
**Yearly Academic Timeline**

### August Workshop
- Report results and recommendations to faculty and academic support staff
- Introduce forthcoming year’s General Education Assessment initiatives

### Fall Semester
- Report results and recommendations to Board of Trustees
- Identify courses for LAC, GES, and FSLO assessment.
- Establish anchor samples for FSLO VALUE rubric criteria
- Gather and analyze data for LAC, GES, and FSLO

### January Workshop
- Calibrate interpretation among faculty for FSLO VALUE rubrics
- Compile faculty recommendations for FSLO benchmarks by level of study

### Spring Semester
- Gather and analyze data for LAC, GES, and FSLO
- Identify FSLO benchmarks by level of study
- Recommend curricular changes and pedagogical practices to improve general education

### General Education Assessment

**Fall Semester**
- Report key indicators of student learning to the Board of Trustees, including General Education Skills (GES) assessment findings and recommendations for Critical & Creative Reasoning, Quantitative Reasoning, Information Literacy, Oral Communication, and Written Communication.
- Review the General Education Assessment plan and establish an operational schedule for the academic year.
- Enact recommended curricular changes from previous year’s general education assessment findings.
- Liberal Arts Curriculum (LAC) Assessment: Identify LAC courses for evaluation and collect data with designated VALUE rubrics.
- General Education Skills (GES) Capstone Assessment: Identify capstone courses by academic program and gather data for evaluation with appropriate VALUE rubrics.
- Focused Student Learning Outcome (FSLO) Assessment: Identify courses throughout levels of undergraduate study (introductory through advanced) that address the annual FSLO, gather representative samples of student work, and gather data for evaluation with the FSLO VALUE rubric.
• FSLO Assessment: Establish an anchor set representing a range in levels of student performance according to the FSLO VALUE rubric.

January Faculty Workshop

• Calibrate FSLO rubric interpretation among the Cedar Crest faculty with anchor set and a representative sample of student work.
• Gather recommendations from faculty on expectations and best practices for FSLO general education by student level, based upon calibration assessment.

Spring Semester

• Liberal Arts Curriculum (LAC) Assessment: Identify LAC courses for evaluation and collect data with designated VALUE rubrics.
• General Education Skills (GES) Capstone Assessment: Identify capstone courses by academic program and gather data for evaluation with appropriate VALUE rubrics.
• Focused Student Learning Outcome (FSLO) Assessment: Identify courses throughout levels of undergraduate study (introductory through advanced) that address the annual FSLO, gather representative samples of student work, and gather data for evaluation with the FSLO VALUE rubric.
• Review LAC, GES, and FSLO assessment data, including (when available) comparative VALUE assessment results from other institutions of higher education.
• Identify FSLO benchmarks by level of undergraduate study and generate recommended pedagogical practices and student learning experiences.
• Recommend revisions to the College’s curricula as a result of assessment findings.

August Faculty Workshop

• Present findings from previous year’s General Education Assessment.
• Advise faculty and academic support staff on best practices to improve general education in the Cedar Crest student learning experience.
# General Education Assessment Measures

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<td>Critical Thinking</td>
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<td>Information Literacy (IL)</td>
<td>Information Literacy</td>
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<td>Oral Presentation (OP)</td>
<td>Oral Communication</td>
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<td>Mathematics &amp; Logic (ML)</td>
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<td>Natural Sciences (NS)</td>
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<tr>
<td>General Education Skills</td>
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<td>Written Communication</td>
<td>Written Communication</td>
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<tr>
<td>Focused Student Learning Outcome</td>
<td>Information Literacy (2014-15)</td>
<td>Information Literacy</td>
<td>Courses Identified by SLOs throughout First-Year to Senior Levels</td>
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<td>Oral Communication (2015-2016)</td>
<td>Oral Communication</td>
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<td></td>
<td>Quantitative Reasoning and Technological Competency (2017-2018)</td>
<td>Quantitative Literacy Inquiry &amp; Analysis</td>
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The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can be shared nationally through a common dialog and understanding of student success.

**Definition**

Creative thinking is both the capacity to combine or synthesize existing ideas, images, or expertise in original ways and the experience of thinking, reacting, and working in an imaginative way characterized by a high degree of innovation, divergent thinking, and risk taking.

**Framing Language**

Creative thinking, as it is fostered within higher education, must be distinguished from less focused types of creativity such as, for example, the creativity exhibited by a small child's drawing, which stems not from an understanding of connections, but from an ignorance of boundaries. Creative thinking in higher education can only be expressed productively within a particular domain. The student must have a strong foundation in the strategies and skills of the domain in order to make connections and synthesize. While demonstrating solid knowledge of the domain's parameters, the creative thinker, at the highest levels of performance, pushes beyond those boundaries in new, unique, or atypical recombinations, uncovering or critically perceiving new syntheses and using or recognizing creative risk-taking to achieve a solution.

The Creative Thinking VALUE Rubric is intended to help faculty assess creative thinking in a broad range of transdisciplinary or interdisciplinary work samples or collections of work. The rubric is made up of a set of attributes that are common to creative thinking across disciplines. Examples of work samples or collections of work that could be assessed for creative thinking may include research papers, lab reports, musical compositions, a mathematical equation that solves a problem, a prototype design, a reflective piece about the final product of an assignment, or other academic works. The work samples or collections of work may be completed by an individual student or a group of students.

**Glossary**

*The definitions that follow were developed to clarify terms and concepts used in this rubric only.*

- **Exemplar**: A model or pattern to be copied or imitated (quoted from www.dictionary.reference.com/browse/exemplar).
- **Domain**: Field of study or activity and a sphere of knowledge and influence.
**CREATIVE THINKING VALUE RUBRIC**

*for more information, please contact value@aacu.org*

**Definition**

Creative thinking is both the capacity to combine or synthesize existing ideas, images, or expertise in original ways and the experience of thinking, reacting, and working in an imaginative way characterized by a high degree of innovation, divergent thinking, and risk taking.

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

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<tr>
<th>Capstone</th>
<th>Milestones</th>
<th>Benchmark</th>
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<tbody>
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<td>4</td>
<td>3</td>
<td>2</td>
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</table>

**Acquiring Competencies**

This step refers to acquiring strategies and skills within a particular domain.

- **Reflect:*** Evaluates creative process and product using domain-appropriate criteria.
- **Create:*** Creates an entirely new object, solution or idea that is appropriate to the domain.
- **Adapt:*** Successfully adapts an appropriate exemplar to his/her own specifications.
- **Model:*** Successfully reproduces an appropriate exemplar.

**Taking Risks**

May include personal risk (fear of embarrassment or rejection) or risk of failure in successfully completing assignment, i.e. going beyond original parameters of assignment, introducing new materials and forms, tackling controversial topics, advocating unpopular ideas or solutions.

- **Actively seeks out and follows through on untested and potentially risky directions or approaches to the assignment in the final product.**
- **Incorporates new directions or approaches to the assignment in the final product.**
- **Considers new directions or approaches without going beyond the guidelines of the assignment.**
- **Stays strictly within the guidelines of the assignment.**

**Solving Problems**

Not only develops a logical, consistent plan to solve problem, but recognizes consequences of solution and can articulate reason for choosing solution.

- **Having selected from among alternatives, develops a logical, consistent plan to solve the problem.**
- **Considers and rejects less acceptable approaches to solving problem.**
- **Only a single approach is considered and is used to solve the problem.**

**Embracing Contradictions**

Integrates alternate, divergent, or contradictory perspectives or ideas fully.

- **Incorporates alternate, divergent, or contradictory perspectives or ideas in a exploratory way.**
- **Includes (recognizes the value of) alternate, divergent, or contradictory perspectives or ideas in a small way.**
- **Acknowledges (mentions in passing) alternate, divergent, or contradictory perspectives or ideas.**

**Innovative Thinking**

Novelty or uniqueness (of idea, claim, question, form, etc.)

- **Extends a novel or unique idea, question, format, or product to create new knowledge or knowledge that crosses boundaries.**
- **Creates a novel or unique idea, question, format, or product.**
- **Experiments with creating a novel or unique idea, question, format, or product.**
- **Reformulates a collection of available ideas.**

**Connecting, Synthesizing, Transforming**

Transforms ideas or solutions into entirely new forms.

- **Synthesizes ideas or solutions into a coherent whole.**
- **Connects ideas or solutions in novel ways.**
- **Recognizes existing connections among ideas or solutions.**
The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can be shared nationally through a common dialog and understanding of student success.

**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.

**Framing Language**

This rubric is designed to be transdisciplinary, reflecting the recognition that success in all disciplines requires habits of inquiry and analysis that share common attributes. Further, research suggests that successful critical thinkers from all disciplines increasingly need to be able to apply those habits in various and changing situations encountered in all walks of life.

This rubric is designed for use with many different types of assignments and the suggestions here are not an exhaustive list of possibilities. Critical thinking can be demonstrated in assignments that require students to complete analyses of text, data, or issues. Assignments that cut across presentation mode might be especially useful in some fields. If insight into the process components of critical thinking (e.g., how information sources were evaluated regardless of whether they were included in the product) is important, assignments focused on student reflection might be especially illuminating.

**Glossary**

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- **Ambiguity**: Information that may be interpreted in more than one way.
- **Assumptions**: Ideas, conditions, or beliefs (often implicit or unstated) that are "taken for granted or accepted as true without proof." (quoted from www.dictionary.reference.com/browse/assumptions)
- **Context**: The historical, ethical, political, cultural, environmental, or circumstantial settings or conditions that influence and complicate the consideration of any issues, ideas, artifacts, and events.
- **Literal meaning**: Interpretation of information exactly as stated. For example, "she was green with envy" would be interpreted to mean that her skin was green.
- **Metaphor**: Information that is (intended to be) interpreted in a non-literal way. For example, "she was green with envy" is intended to convey an intensity of emotion, not a skin color.
**CRITICAL THINKING VALUE RUBRIC**

**for more information, please contact value@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 benchmark (cell one) level performance._

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<tr>
<td><strong>Explanation of issues</strong></td>
<td>Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.</td>
<td>Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.</td>
<td>Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown.</td>
</tr>
<tr>
<td><strong>Evidence</strong></td>
<td>Information is taken from source(s) with enough interpretation/evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are questioned thoroughly.</td>
<td>Information is taken from source(s) with enough interpretation/evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are subject to questioning.</td>
<td>Information is taken from source(s) without any interpretation/evaluation. Viewpoints of experts are taken as fact, without question.</td>
</tr>
<tr>
<td><strong>Influence of context and assumptions</strong></td>
<td>Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.</td>
<td>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).</td>
<td>Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions). Begins to identify some contexts when presenting a position.</td>
</tr>
<tr>
<td><strong>Student's position (perspective, thesis/hypothesis)</strong></td>
<td>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).</td>
<td>Specific position (perspective, thesis/hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/hypothesis).</td>
<td>Specific position (perspective, thesis/hypothesis) is stated, but is simplistic and obvious.</td>
</tr>
<tr>
<td><strong>Conclusions and related outcomes (implications and consequences)</strong></td>
<td>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.</td>
<td>Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.</td>
<td>Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.</td>
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Definition

Ethical Reasoning is reasoning about right and wrong human conduct. It requires students to be able to assess their own ethical values and the social context of problems, recognize ethical issues in a variety of settings, think about how different ethical perspectives might be applied to ethical dilemmas and consider the ramifications of alternative actions. Students’ ethical self identity evolves as they practice ethical decision-making skills and learn how to describe and analyze positions on ethical issues.

Framing Language

This rubric is intended to help faculty evaluate work samples and collections of work that demonstrate student learning about ethics. Although the goal of a liberal education should be to help students turn what they’ve learned in the classroom into action, pragmatically it would be difficult, if not impossible, to judge whether or not students would act ethically when faced with real ethical situations. What can be evaluated using a rubric is whether students have the intellectual tools to make ethical choices.

The rubric focuses on five elements: Ethical Self Awareness, Ethical Issue Recognition, Understanding Different Ethical Perspectives/Concepts, Application of Ethical Principles, and Evaluation of Different Ethical Perspectives/Concepts. Students’ Ethical Self Identity evolves as they practice ethical decision-making skills and learn how to describe and analyze positions on ethical issues. Presumably, they will choose ethical actions when faced with ethical issues.

Glossary

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- Core Beliefs: Those fundamental principles that consciously or unconsciously influence one's ethical conduct and ethical thinking. Even when unacknowledged, core beliefs shape one's responses. Core beliefs can reflect one's environment, religion, culture or training. A person may or may not choose to act on their core beliefs.
- Ethical Perspectives/concepts: The different theoretical means through which ethical issues are analyzed, such as ethical theories (e.g., utilitarian, natural law, virtue) or ethical concepts (e.g., rights, justice, duty).
- Complex, multi-layered (gray) context: The sub-parts or situational conditions of a scenario that bring two or more ethical dilemmas (issues) into the mix/problem/context/for student's identification.
- Cross-relationships among the issues: Obvious or subtle connections between/among the sub-parts or situational conditions of the issues present in a scenario (e.g., relationship of production of corn as part of climate change issue).
# Ethical Reasoning VALUE Rubric

**Definition**

Ethical Reasoning is reasoning about right and wrong human conduct. It requires students to be able to assess their own ethical values and the social context of problems, recognize ethical issues in a variety of settings, think about how different ethical perspectives might be applied to ethical dilemmas, and consider the ramifications of alternative actions. Students’ ethical self-identity evolves as they practice ethical decision-making skills and learn how to describe and analyze positions on ethical issues.

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

<table>
<thead>
<tr>
<th>Capstone</th>
<th>Milestones</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethical Self-Awareness</td>
<td>Student discusses in detail/analyzes both core beliefs and the origins of the core beliefs and discussion has greater depth and clarity.</td>
<td>Student states both core beliefs and the origins of the core beliefs.</td>
</tr>
<tr>
<td>Understanding Different Ethical Perspectives/Concepts</td>
<td>Student can name the major theory she/he uses, and is only able to present the gist of the named theory.</td>
<td>Student can recognize basic and obvious ethical issues and grasp (incompletely) the complexities or interrelationships among the issues.</td>
</tr>
<tr>
<td>Ethical Issue Recognition</td>
<td>Student can independently apply ethical perspectives/concepts to an ethical question, accurately, and is able to consider full implications of the application.</td>
<td>Student can apply ethical perspectives/concepts to an ethical question, independently (to a new example) and the application is inaccurate.</td>
</tr>
<tr>
<td>Evaluation of Different Ethical Perspectives/Concepts</td>
<td>Student states a position and can state the objections to, assumptions and implications of and can reasonably defend against the objections to, assumptions and implications of different ethical perspectives/concepts, and the student's defense is adequate and effective.</td>
<td>Student states a position and can state the objections to, assumptions and implications of different ethical perspectives/concepts but does not respond to them (and ultimately objections, assumptions, and implications are compartmentalized by student and do not affect student's position.)</td>
</tr>
</tbody>
</table>
Global Learning VALUE Rubric

for more information, please contact value@aacu.org

Definition

Global learning is a critical analysis of and an engagement with complex, interdependent global systems and legacies (such as natural, physical, social, cultural, economic, and political) and their implications for people’s lives and the earth’s sustainability. Through global learning, students should 1) become informed, open-minded, and responsible people who are attentive to diversity across the spectrum of differences, 2) seek to understand how their actions affect both local and global communities, and 3) address the world’s most pressing and enduring issues collaboratively and equitably.

Framing Language

Effective and transformative global learning offers students meaningful opportunities to analyze and explore complex global challenges, collaborate respectfully with diverse others, apply learning to take responsible action in contemporary global contexts, and evaluate the goals, methods, and consequences of that action. Global learning should enhance students’ sense of identity, community, ethics, and perspective-taking. Global learning is based on the principle that the world is a collection of interdependent yet inequitable systems and that higher education has a vital role in expanding knowledge of human and natural systems, privilege and stratification, and sustainability and development to foster individuals’ ability to advance equity and justice at home and abroad. Global learning cannot be achieved in a single course or a single experience but is acquired cumulatively across students’ entire college career through an institution’s curricular and co-curricular programming. As this rubric is designed to assess global learning on a programmatic level across time, the benchmarks (levels 1-4) may not be directly applicable to a singular experience, course, or assignment. Depending on the context, there may be development within one level rather than growth from level to level.

We encourage users of the Global Learning Rubric to also consult three other closely related VALUE Rubrics: Civic Engagement, Intercultural Knowledge and Competence, and Ethical Reasoning.

Glossary

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

Global Self-Awareness: in the context of global learning, the continuum through which students develop a mature, integrated identity with a systemic understanding of the interrelationships among the self, local and global communities, and the natural and physical world.

Perspective Taking: the ability to engage and learn from perspectives and experiences different from one’s own and to understand how one’s place in the world both informs and limits one’s knowledge. The goal is to develop the capacity to understand the interrelationships between multiple perspectives, such as personal, social, cultural, disciplinary, environmental, local, and global.

Cultural Diversity: the ability to recognize the origins and influences of one’s own cultural heritage along with its limitations in providing all that one needs to know in the world. This includes the curiosity to learn respectfully about the cultural diversity of other people and on an individual level to traverse cultural boundaries to bridge differences and collaboratively reach common goals. On a systems level, the important skill of comparatively analyzing how cultures can be marked and assigned a place within power structures that determine hierarchies, inequalities, and opportunities and which can vary over time and place. This can include, but is not limited to, understanding race, ethnicity, gender, nationhood, religion, and class.

Personal and Social Responsibility: the ability to recognize one’s responsibilities to society—locally, nationally, and globally—and to develop a perspective on ethical and power relations both across the globe and within individual societies. This requires developing competence in ethical and moral reasoning and action.

Global Systems: the complex and overlapping worldwide systems, including natural systems (those systems associated with the natural world including biological, chemical, and physical sciences) and human systems (those systems developed by humans such as cultural, economic, political, and built), which operate in observable patterns and often are affected by or are the result of human design or disruption. These systems influence how life is lived and what options are open to whom. Students need to understand how these systems 1) are influenced and/or constructed, 2) operate with differential consequences, 3) affect the human and natural world, and 4) can be altered.

Knowledge Application: in the context of global learning, the application of an integrated and systemic understanding of the interrelationships between contemporary and past challenges facing cultures, societies, and the natural world (i.e., contexts) on the local and global levels. An ability to apply knowledge and skills gained through higher learning to real-life problem-solving both alone and with others.
**Definition**

Global learning is a critical analysis of and an engagement with complex, interdependent global systems and legacies (such as natural, physical, social, cultural, economic, and political) and their implications for people's lives and the earth's sustainability. Through global learning, students should 1) become informed, open-minded, and responsible people who are attentive to diversity across the spectrum of differences, 2) seek to understand how their actions affect both local and global communities, and 3) address the world's most pressing and enduring issues collaboratively and equitably.

_Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance._

<table>
<thead>
<tr>
<th>Capstone</th>
<th>Milestones</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Global Self-Awareness</strong></td>
<td>Effectively addresses significant issues in the natural and human world based on articulating one's identity in a global context.</td>
<td>Evaluates the global impact of one's own and others' specific local actions on the natural and human world.</td>
</tr>
<tr>
<td><strong>Perspective Taking</strong></td>
<td>Evaluates and applies diverse perspectives to complex subjects within natural and human systems in the face of multiple and even conflicting positions (i.e. cultural, disciplinary, and ethical)</td>
<td>Synthesizes other perspectives (such as cultural, disciplinary, and ethical) when investigating subjects within natural and human systems.</td>
</tr>
<tr>
<td><strong>Cultural Diversity</strong></td>
<td>Adapts and applies a deep understanding of multiple worldviews, experiences, and power structures while initiating meaningful interaction with other cultures to address significant global problems.</td>
<td>Analyzes substantial connections between the worldviews, power structures, and experiences of multiple cultures historically or in contemporary contexts, incorporating respectful interactions with other cultures.</td>
</tr>
<tr>
<td><strong>Personal and Social Responsibility</strong></td>
<td>Takes informed and responsible action to address ethical, social, and environmental challenges in global systems and evaluates the local and broader consequences of individual and collective interventions.</td>
<td>Analyzes the ethical, social, and environmental consequences of global systems and identifies a range of actions informed by one's sense of personal and civic responsibility.</td>
</tr>
<tr>
<td><strong>Understanding Global Systems</strong></td>
<td>Uses deep knowledge of the historic and contemporary role and differential effects of human organizations and actions on global systems to develop and advocate for informed, appropriate action to solve complex problems in the human and natural worlds.</td>
<td>Analyzes major elements of global systems, including their historic and contemporary interconnections and the differential effects of human organizations and actions, to pose elementary solutions to complex problems in the human and natural worlds.</td>
</tr>
<tr>
<td><strong>Applying Knowledge to Contemporary Global Contexts</strong></td>
<td>Applies knowledge and skills to implement sophisticated, appropriate, and workable solutions to address complex global problems using interdisciplinary perspectives independently or with others.</td>
<td>Plans and evaluates more complex solutions to global challenges that are appropriate to their contexts using multiple disciplinary perspectives (such as cultural, historical, and scientific).</td>
</tr>
</tbody>
</table>
The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can be shared nationally through a common dialog and understanding of student success. In July 2013, there was a correction to Dimension 3: Evaluate Information and its Sources Critically.

**Definition**

The ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively and responsibly use and share that information for the problem at hand. - Adopted from the National Forum on Information Literacy

**Framing Language**

This rubric is recommended for use evaluating a collection of work, rather than a single work sample in order to fully gauge students’ information skills. Ideally, a collection of work would contain a wide variety of different types of work and might include: research papers, editorials, speeches, grant proposals, marketing or business plans, PowerPoint presentations, posters, literature reviews, position papers, and argument critiques to name a few. In addition, a description of the assignments with the instructions that initiated the student work would be vital in providing the complete context for the work. Although a student's final work must stand on its own, evidence of a student's research and information gathering processes, such as a research journal/diary, could provide further demonstration of a student's information proficiency and for some criteria on this rubric would be required.
**Definition**

The ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively and responsibly use and share that information for the problem at hand. - The National Forum on Information Literacy

*Evaluated are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.*

<table>
<thead>
<tr>
<th></th>
<th>Capstone 4</th>
<th>Milestones 3</th>
<th>Milestones 2</th>
<th>Benchmark 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Determine the Extent of Information Needed</strong></td>
<td>Effectively defines the scope of the research question or thesis. Effectively determines key concepts. Types of information (sources) selected directly relate to concepts or answer research question.</td>
<td>Defines the scope of the research question or thesis completely. Can determine key concepts. Types of information (sources) selected relate to concepts or answer research question.</td>
<td>Defines the scope of the research question or thesis incompletely (parts are missing, remains too broad or too narrow, etc.). Can determine key concepts. Types of information (sources) selected partially relate to concepts or answer research question.</td>
<td>Has difficulty defining the scope of the research question or thesis. Has difficulty determining key concepts. Types of information (sources) selected do not relate to concepts or answer research question.</td>
</tr>
<tr>
<td><strong>Access the Needed Information</strong></td>
<td>Accesses information using effective, well-designed search strategies and most appropriate information sources.</td>
<td>Accesses information using variety of search strategies and some relevant information sources. Demonstrates ability to refine search.</td>
<td>Accesses information using simple search strategies, retrieves information from limited and similar sources.</td>
<td>Accesses information randomly, retrieves information that lacks relevance and quality.</td>
</tr>
<tr>
<td><strong>Evaluate Information and its Sources Critically</strong>*</td>
<td>Chooses a variety of information sources appropriate to the scope and discipline of the research question. Selects sources after considering the importance (to the researched topic) of the multiple criteria used (such as relevance to the research question, currency, authority, audience, and bias or point of view).</td>
<td>Chooses a variety of information sources appropriate to the scope and discipline of the research question. Selects sources using multiple criteria (such as relevance to the research question, currency, and authority.)</td>
<td>Chooses a variety of information sources. Selects sources using basic criteria (such as relevance to the research question and currency.)</td>
<td>Chooses a few information sources. Selects sources using limited criteria (such as relevance to the research question.)</td>
</tr>
<tr>
<td><strong>Use Information Effectively to Accomplish a Specific Purpose</strong></td>
<td>Communicates, organizes and synthesizes information from sources to fully achieve a specific purpose, with clarity and depth</td>
<td>Communicates, organizes and synthesizes information from sources. Intended purpose is achieved.</td>
<td>Communicates and organizes information from sources. The information is not yet synthesized, so the intended purpose is not fully achieved.</td>
<td>Communicates information from sources. The information is fragmented and/or used inappropriately (misquoted, taken out of context, or incorrectly paraphrased, etc.), so the intended purpose is not achieved.</td>
</tr>
<tr>
<td><strong>Access and Use Information Ethically and Legally</strong></td>
<td>Students use correctly all of the following information use strategies (use of citations and references; choice of paraphrasing, summary, or quoting; using information in ways that are true to original context; distinguishing between common knowledge and ideas requiring attribution) and demonstrate a full understanding of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.</td>
<td>Students use correctly three of the following information use strategies (use of citations and references; choice of paraphrasing, summary, or quoting; using information in ways that are true to original context; distinguishing between common knowledge and ideas requiring attribution) and demonstrates a full understanding of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.</td>
<td>Students use correctly two of the following information use strategies (use of citations and references; choice of paraphrasing, summary, or quoting; using information in ways that are true to original context; distinguishing between common knowledge and ideas requiring attribution) and demonstrates a full understanding of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.</td>
<td>Students use correctly one of the following information use strategies (use of citations and references; choice of paraphrasing, summary, or quoting; using information in ways that are true to original context; distinguishing between common knowledge and ideas requiring attribution) and demonstrates a full understanding of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.</td>
</tr>
</tbody>
</table>

*Corrected Dimension 3: Evaluate Information and its Sources Critically in July 2013*
INQUIRY AND ANALYSIS VALUE RUBRIC

for more information, please contact value@aacu.org

The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can be shared nationally through a common dialog and understanding of student success.

Definition

Inquiry is a systematic process of exploring issues, objects or works through the collection and analysis of evidence that results in informed conclusions or judgments. Analysis is the process of breaking complex topics or issues into parts to gain a better understanding of them.

Framing Language

This rubric is designed for use in a wide variety of disciplines. Since the terminology and process of inquiry are discipline-specific, an effort has been made to use broad language which reflects multiple approaches and assignments while addressing the fundamental elements of sound inquiry and analysis (including topic selection, existing knowledge, design, analysis, etc.) The rubric language assumes that the inquiry and analysis process carried out by the student is appropriate for the discipline required. For example, if analysis using statistical methods is appropriate for the discipline then a student would be expected to use an appropriate statistical methodology for that analysis. If a student does not use a discipline-appropriate process for any criterion, that work should receive a performance rating of "1" or "0" for that criterion.

In addition, this rubric addresses the products of analysis and inquiry, not the processes themselves. The complexity of inquiry and analysis tasks is determined in part by how much information or guidance is provided to a student and how much the student constructs. The more the student constructs, the more complex the inquiry process. For this reason, while the rubric can be used if the assignments or purposes for work are unknown, it will work most effectively when those are known. Finally, faculty are encouraged to adapt the essence and language of each rubric criterion to the disciplinary or interdisciplinary context to which it is applied.

Glossary

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- Conclusions: A synthesis of key findings drawn from research/evidence.
- Limitations: Critique of the process or evidence.
- Implications: How inquiry results apply to a larger context or the real world.
# Inquiry and Analysis VALUE Rubric

## Definition

Inquiry is a systematic process of exploring issues, objects or works through the collection and analysis of evidence that results in informed conclusions or judgments. Analysis is the process of breaking complex topics or issues into parts to gain a better understanding of them.

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

## Capstone 4

<table>
<thead>
<tr>
<th>Topic selection</th>
<th>Identifies a creative, focused, and manageable topic that addresses potentially significant yet previously less-explored aspects of the topic.</th>
<th>Identifies a focused and manageable/doable topic that appropriately addresses relevant aspects of the topic.</th>
<th>Identifies a topic that while manageable/doable, is too narrowly focused and leaves out relevant aspects of the topic.</th>
<th>Identifies a topic that is far too general and wide-ranging as to be manageable and doable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Knowledge, Research, and/or Views</td>
<td>Synthesizes in-depth information from relevant sources representing various points of view/approaches.</td>
<td>Presents in-depth information from relevant sources representing various points of view/approaches.</td>
<td>Presents information from relevant sources representing limited points of view/approaches.</td>
<td>Presents information from irrelevant sources representing limited points of view/approaches.</td>
</tr>
<tr>
<td>Design Process</td>
<td>All elements of the methodology or theoretical framework are skillfully developed. Appropriate methodology or theoretical frameworks may be synthesized from across disciplines or from relevant subdisciplines.</td>
<td>Critical elements of the methodology or theoretical framework are appropriately developed, however, more subtle elements are ignored or unaccounted for.</td>
<td>Critical elements of the methodology or theoretical framework are missing, incorrectly developed, or unfocused.</td>
<td>Inquiry design demonstrates a misunderstanding of the methodology or theoretical framework.</td>
</tr>
<tr>
<td>Analysis</td>
<td>Organizes and synthesizes evidence to reveal insightful patterns, differences, or similarities related to focus.</td>
<td>Organizes evidence to reveal important patterns, differences, or similarities related to focus.</td>
<td>Organizes evidence, but the organization is not effective in revealing important patterns, differences, or similarities.</td>
<td>Lists evidence, but it is not organized and/or is unrelated to focus.</td>
</tr>
<tr>
<td>Conclusions</td>
<td>States a conclusion that is a logical extrapolation from the inquiry findings.</td>
<td>States a conclusion focused solely on the inquiry findings. The conclusion arises specifically from and responds specifically to the inquiry findings.</td>
<td>States a general conclusion that, because it is so general, also applies beyond the scope of the inquiry findings.</td>
<td>States an ambiguous, illogical, or unsupportable conclusion from inquiry findings.</td>
</tr>
<tr>
<td>Limitations and Implications</td>
<td>Insightfully discusses in detail relevant and supported limitations and implications.</td>
<td>Discusses relevant and supported limitations and implications.</td>
<td>Presents relevant and supported limitations and implications.</td>
<td>Presents limitations and implications, but they are possibly irrelevant and unsupported.</td>
</tr>
</tbody>
</table>
The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can be shared nationally through a common dialog and understanding of student success.

### Definition

Oral communication is a prepared, purposeful presentation designed to increase knowledge, to foster understanding, or to promote change in the listeners' attitudes, values, beliefs, or behaviors.

### Framing Language

Oral communication takes many forms. This rubric is specifically designed to evaluate oral presentations of a single speaker at a time and is best applied to live or video-recorded presentations. For panel presentations or group presentations, it is recommended that each speaker be evaluated separately. This rubric best applies to presentations of sufficient length such that a central message is conveyed, supported by one or more forms of supporting materials and includes a purposeful organization. An oral answer to a single question not designed to be structured into a presentation does not readily apply to this rubric.

### Glossary

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- **Central message:** The main point/thesis/"bottom line"/"take-away" of a presentation. A clear central message is easy to identify; a compelling central message is also vivid and memorable.
- **Delivery techniques:** Posture, gestures, eye contact, and use of the voice. Delivery techniques enhance the effectiveness of the presentation when the speaker stands and moves with authority, looks more often at the audience than at his/her speaking materials/notes, uses the voice expressively, and uses few vocal fillers ("um," "uh," "like," "you know," etc.).
- **Language:** Vocabulary, terminology, and sentence structure. Language that supports the effectiveness of a presentation is appropriate to the topic and audience, grammatical, clear, and free from bias. Language that enhances the effectiveness of a presentation is also vivid, imaginative, and expressive.
- **Organization:** The grouping and sequencing of ideas and supporting material in a presentation. An organizational pattern that supports the effectiveness of a presentation typically includes an introduction, one or more identifiable sections in the body of the speech, and a conclusion. An organizational pattern that enhances the effectiveness of the presentation reflects a purposeful choice among possible alternatives, such as a chronological pattern, a problem-solution pattern, an analysis-of-parts pattern, etc., that makes the content of the presentation easier to follow and more likely to accomplish its purpose.
- **Supporting material:** Explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities, and other kinds of information or analysis that supports the principal ideas of the presentation. Supporting material is generally credible when it is relevant and derived from reliable and appropriate sources. Supporting material is highly credible when it is also vivid and varied across the types listed above (e.g., a mix of examples, statistics, and references to authorities). Supporting material may also serve the purpose of establishing the speakers credibility. For example, in presenting a creative work such as a dramatic reading of Shakespeare, supporting evidence may not advance the ideas of Shakespeare, but rather serve to establish the speaker as a credible Shakespearean actor.
**ORAL COMMUNICATION VALUE RUBRIC**

**for more information, please contact value@aacu.org**

**Definition**

Oral communication is a prepared, purposeful presentation designed to increase knowledge, to foster understanding, or to promote change in the listeners' attitudes, values, beliefs, or behaviors.

_Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance._

<table>
<thead>
<tr>
<th></th>
<th>Capstone</th>
<th>3</th>
<th>2</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Organization</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clearly and consistently observable and is skillful and makes the content of the presentation cohesive.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Language</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language choices are imaginative, memorable, and compelling, and enhance the effectiveness of the presentation. Language in presentation is appropriate to audience.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Delivery</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appears polished and confident.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Supporting Material</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) make appropriate reference to information or analysis that significantly supports the presentation or establishes the presenter's credibility/authority on the topic.</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Central Message</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
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The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can be shared nationally through a common dialog and understanding of student success.

**Definition**

Quantitative Literacy (QL) – also known as Numeracy or Quantitative Reasoning (QR) – is a "habit of mind," competency, and comfort in working with numerical data. Individuals with strong QL skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They understand and can create sophisticated arguments supported by quantitative evidence and they can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate).

**Quantitative Literacy Across the Disciplines**

Current trends in general education reform demonstrate that faculty are recognizing the steadily growing importance of Quantitative Literacy (QL) in an increasingly quantitative and data-dense world. AAC&U’s recent survey showed that concerns about QL skills are shared by employers, who recognize that many of today’s students will need a wide range of high level quantitative skills to complete their work responsibilities. Virtually all of today’s students, regardless of career choice, will need basic QL skills such as the ability to draw information from charts, graphs, and geometric figures, and the ability to accurately complete straightforward estimations and calculations.

Preliminary efforts to find student work products which demonstrate QL skills proved a challenge in this rubric creation process. It’s possible to find pages of mathematical problems, but what those problem sets don’t demonstrate is whether the student was able to think about and understand the meaning of her work. It’s possible to find research papers that include quantitative information, but those papers often don’t provide evidence that allows the evaluator to see how much of the thinking was done by the original source (often carefully cited in the paper) and how much was done by the student herself, or whether conclusions drawn from analysis of the source material are even accurate.

Given widespread agreement about the importance of QL, it becomes incumbent on faculty to develop new kinds of assignments which give students substantive, contextualized experience in using such skills as analyzing quantitative information, representing quantitative information in appropriate forms, completing calculations to answer meaningful questions, making judgments based on quantitative data and communicating the results of that work for various purposes and audiences. As students gain experience with those skills, faculty must develop assignments that require students to create work products which reveal their thought processes and demonstrate the range of their QL skills.

This rubric provides for faculty a definition for QL and a rubric describing four levels of QL achievement which might be observed in work products within work samples or collections of work. Members of AAC&U’s rubric development team for QL hope that these materials will aid in the assessment of QL – but, equally important, we hope that they will help institutions and individuals in the effort to more thoroughly embed QL across the curriculum of colleges and universities.

**Framing Language**

This rubric has been designed for the evaluation of work that addresses quantitative literacy (QL) in a substantive way. QL is not just computation, not just the citing of someone else’s data. QL is a habit of mind, a way of thinking about the world that relies on data and on the mathematical analysis of data to make connections and draw conclusions. Teaching QL requires us to design assignments that address authentic, data-based problems. Such assignments may call for the traditional written paper, but we can imagine other alternatives: a video of a PowerPoint presentation, perhaps, or a well designed series of web pages. In any case, a successful demonstration of QL will place the mathematical work in the context of a full and robust discussion of the underlying issues addressed by the assignment.

Finally, QL skills can be applied to a wide array of problems of varying difficulty, confounding the use of this rubric. For example, the same student might demonstrate high levels of QL achievement when working on a simplistic problem and low levels of QL achievement when working on a very complex problem. Thus, to accurately assess a students QL achievement it may be necessary to measure QL achievement within the context of problem complexity, much as is done in diving competitions where two scores are given, one for the difficulty of the dive, and the other for the skill in accomplishing the dive. In this context, that would mean giving one score for the complexity of the problem and another score for the QL achievement in solving the problem.
# Quantitative Literacy VALUE Rubric

for more information, please contact value@aacu.org

**Definition**

Quantitative Literacy (QL) – also known as Numeracy or Quantitative Reasoning (QR) – is a “habit of mind,” competency, and comfort in working with numerical data. Individuals with strong QL skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They understand and can create sophisticated arguments supported by quantitative evidence and they can clearly communicate those arguments in a variety of formats (using words, tables, graphs, mathematical equations, etc., as appropriate).

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

<table>
<thead>
<tr>
<th>Interpretation</th>
<th>Capstone</th>
<th>Milestones</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words)</td>
<td>Provides accurate explanations of information presented in mathematical forms. Makes appropriate inferences based on that information. For example, accurately explains the trend data shown in a graph and makes reasonable predictions regarding what the data suggest about future events.</td>
<td>Provides accurate explanations of information presented in mathematical forms. For instance, accurately explains the trend data shown in a graph.</td>
<td>Attempts to explain information presented in mathematical forms, but draws incorrect conclusions about what the information means. For example, attempts to explain the trend data shown in a graph, but will frequently misinterpret the nature of that trend, perhaps by confusing positive and negative trends.</td>
</tr>
<tr>
<td><strong>Representation</strong></td>
<td>Skillfully converts relevant information into an insightful mathematical portrayal in a way that contributes to a further or deeper understanding.</td>
<td>Competently converts relevant information into an appropriate and desired mathematical portrayal.</td>
<td>Completes conversion of information but resulting mathematical portrayal is only partially appropriate or accurate.</td>
</tr>
<tr>
<td><strong>Calculation</strong></td>
<td>Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. Calculations are also presented elegantly (clearly, concisely, etc.)</td>
<td>Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem.</td>
<td>Calculations are attempted but are both unsuccessful and are not comprehensive.</td>
</tr>
<tr>
<td><strong>Application / Analysis</strong></td>
<td>Uses the quantitative analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work.</td>
<td>Uses the quantitative analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work.</td>
<td>Uses the quantitative analysis of data as the basis for workmanlike (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this work.</td>
</tr>
<tr>
<td><strong>Assumptions</strong></td>
<td>Explicitly describes assumptions and provides compelling rationale for why each assumption is appropriate. Shows awareness that confidence in final conclusions is limited by the accuracy of the assumptions.</td>
<td>Explicitly describes assumptions and provides compelling rationale for why assumptions are appropriate.</td>
<td>Attempts to describe assumptions.</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Uses quantitative information in connection with the argument or purpose of the work, presents it in an effective format, and explicates it with consistently high quality.</td>
<td>Uses quantitative information in connection with the argument or purpose of the work, though data may be presented in a less than completely effective format or some parts of the explication may be uneven.</td>
<td>Presents an argument for which quantitative evidence is pertinent, but does not provide adequate explicit numerical support. (May use quasi-quantitative words such as “many,” “few,” “increasing,” “small,” and the like in place of actual quantities.)</td>
</tr>
</tbody>
</table>
The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can be shared nationally through a common dialog and understanding of student success.

**Definition**

Written communication is the development and expression of ideas in writing. Written communication involves learning to work in many genres and styles. It can involve working with many different writing technologies, and mixing texts, data, and images. Written communication abilities develop through iterative experiences across the curriculum.

**Framing Language**

This writing rubric is designed for use in a wide variety of educational institutions. The most clear finding to emerge from decades of research on writing assessment is that the best writing assessments are locally determined and sensitive to local context and mission. Users of this rubric should, in the end, consider making adaptations and additions that clearly link the language of the rubric to individual campus contexts.

This rubric focuses assessment on how specific written work samples or collections of work respond to specific contexts. The central question guiding the rubric is "How well does writing respond to the needs of audience(s) for the work?" In focusing on this question the rubric does not attend to other aspects of writing that are equally important: issues of writing process, writing strategies, writers' fluency with different modes of textual production or publication, or writer's growing engagement with writing and disciplinarity through the process of writing.

Evaluators using this rubric must have information about the assignments or purposes for writing guiding writers' work. Also recommended is including reflective work samples of collections of work that address such questions as: What decisions did the writer make about audience, purpose, and genre as s/he compiled the work in the portfolio? How are those choices evident in the writing -- in the context, organization and structure, reasoning, evidence, mechanical and surface conventions, and citational systems used in the writing? This will enable evaluators to have a clear sense of how writers understand the assignments and take it into consideration as they evaluate.

The first section of this rubric addresses the context and purpose for writing. A work sample or collections of work can convey the context and purpose for the writing tasks it showcases by including the writing assignments associated with work samples. But writers may also convey the context and purpose for their writing within the texts. It is important for faculty and institutions to include directions for students about how they should represent their writing contexts and purposes.

Faculty interested in the research on writing assessment that has guided our work here can consult the National Council of Teachers of English/Council of Writing Program Administrators' White Paper on Writing Assessment (2008; www.wpacouncil.org/whitepaper) and the Conference on College Composition and Communication's Writing Assessment: A Position Statement (2008; www.ncte.org/ccce/resources/positions/123784.htm)

**Glossary**

The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- **Content Development**: The ways in which the text explores and represents its topic in relation to its audience and purpose.
- **Purpose and purpose for writing**: The context of writing is the situation surrounding a text: who is reading it? who is writing it? Under what circumstances will the text be shared or circulated? What social or political factors might affect how the text is composed or interpreted? The purpose for writing is the writer's intended effect on an audience. Writers might want to persuade or inform; they might want to report or summarize information; they might want to work through complexity or confusion; they might want to argue with other writers, or connect with other writers; they might want to convey urgency or amuse; they might write for themselves or for an assignment or to remember.
- **Disciplinary conventions**: Formal and informal rules that constitute what is seen generally as appropriate within different academic fields, e.g. introductory strategies, use of passive voice or first person point of view, expectations for thesis or hypothesis, expectations for kinds of evidence and support that are appropriate to the task at hand, use of primary and secondary sources to provide evidence and support arguments and to document critical perspectives on the topic. Writers will incorporate sources according to disciplinary and genre conventions, according to the writer's purpose for the text. Through increasingly sophisticated use of sources, writers develop an ability to differentiate between their own ideas and the ideas of others, credit and build upon work already accomplished in the field or issue they are addressing, and provide meaningful examples to readers.
- **Evidence**: Source material that is used to extend, in purposeful ways, writers' ideas in a text.
- **Genre conventions**: Formal and informal rules for particular kinds of texts and/or media that guide formatting, organization, and stylistic choices, e.g. lab reports, academic papers, poetry, webpages, or personal essays.
- **Sources**: Texts (written, oral, behavioral, visual, or other) that writers draw on as they work for a variety of purposes -- to extend, argue with, develop, define, or shape their ideas, for example.
**Written Communication VALUE Rubric**

*for more information, please contact value@aacu.org*

**Definition**

Written communication is the development and expression of ideas in writing. Written communication involves learning to work in many genres and styles. It can involve working with many different writing technologies, and mixing texts, data, and images. Written communication abilities develop through iterative experiences across the curriculum.

Evaluator are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

<table>
<thead>
<tr>
<th>Context of and Purpose for Writing</th>
<th>Capstone</th>
<th>3</th>
<th>Milestones</th>
<th>2</th>
<th>Benchmark</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes considerations of audience, purpose, and the circumstances surrounding the writing task(s).</td>
<td>Demonstrates a thorough understanding of context, audience, and purpose that is responsive to the assigned task(s) and focuses all elements of the work.</td>
<td>Demonstrates adequate consideration of context, audience, purpose, and a clear focus on the assigned task(s) (e.g., the task aligns with audience, purpose, and context).</td>
<td>Demonstrates awareness of context, audience, purpose, and to the assigned tasks(s) (e.g., begins to show awareness of audience's perceptions and assumptions).</td>
<td>Demonstrates minimal attention to context, audience, purpose, and to the assigned tasks(s) (e.g., expectation of instructor or self as audience).</td>
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<td></td>
</tr>
<tr>
<td><strong>Content Development</strong></td>
<td>Uses appropriate, relevant, and compelling content to illustrate mastery of the subject, conveying the writer's understanding, and shaping the whole work.</td>
<td>Uses appropriate, relevant, and compelling content to explore ideas within the context of the discipline and shape the whole work.</td>
<td>Uses appropriate and relevant content to develop and explore ideas through most of the work.</td>
<td>Uses appropriate and relevant content to develop simple ideas in some parts of the work.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Genre and Disciplinary Conventions</strong></td>
<td>Demonstrates detailed attention to and successful execution of a wide range of conventions particular to a specific discipline and/or writing task(s) including organization, content, presentation, formatting, and stylistic choices</td>
<td>Demonstrates consistent use of important conventions particular to a specific discipline and/or writing task(s), including organization, content, presentation, and stylistic choices</td>
<td>Follows expectations appropriate to a specific discipline and/or writing task(s) for basic organization, content, and presentation</td>
<td>Attempts to use a consistent system for basic organization and presentation.</td>
<td></td>
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</tr>
<tr>
<td><strong>Sources and Evidence</strong></td>
<td>Demonstrates skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate for the discipline and genre of the writing</td>
<td>Demonstrates consistent use of credible, relevant sources to support ideas that are situated within the discipline and genre of the writing.</td>
<td>Demonstrates an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline and genre of the writing.</td>
<td>Demonstrates an attempt to use sources to support ideas in the writing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Control of Syntax and Mechanics</strong></td>
<td>Uses graceful language that skillfully communicates meaning to readers with clarity and fluency, and is virtually error-free.</td>
<td>Uses straightforward language that generally conveys meaning to readers. The language in the portfolio has few errors.</td>
<td>Uses language that generally conveys meaning to readers with clarity, although writing may include some errors.</td>
<td>Uses language that sometimes impedes meaning because of errors in usage.</td>
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</tr>
</tbody>
</table>
The Essential Learning Outcomes

Beginning in school, and continuing at successively higher levels across their college studies, students should prepare for twenty-first-century challenges by gaining:

Knowledge of Human Cultures and the Physical and Natural World

- Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

  *Focused* by engagement with big questions, both contemporary and enduring

Intellectual and Practical Skills, including

- Inquiry and analysis
- Critical and creative thinking
- Written and oral communication
- Quantitative literacy
- Information literacy
- Teamwork and problem solving

  *Practiced extensively*, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance

Personal and Social Responsibility, including

- Civic knowledge and engagement—local and global
- Intercultural knowledge and competence
- Ethical reasoning and action
- Foundations and skills for lifelong learning

  *Anchored* through active involvement with diverse communities and real-world challenges

Integrative and Applied Learning, including

- Synthesis and advanced accomplishment across general and specialized studies

  *Demonstrated* through the application of knowledge, skills, and responsibilities to new settings and complex problems

Note: This listing was developed through a multiyear dialogue with hundreds of colleges and universities about needed goals for student learning; analysis of a long series of recommendations and reports from the business community; and analysis of the accreditation requirements for engineering, business, nursing, and teacher education. The findings are documented in previous publications of the Association of American Colleges and Universities: Greater Expectations: A New Vision for Learning as a Nation Goes to College (2002), Taking Responsibility for the Quality of the Baccalaureate Degree (2004), and College Learning for the New Global Century (2007). For further information, see www.aacu.org/leap.