

## **General Education Rubrics**

Rubrics represent guides for course designers/instructors, students, and evaluators. Course designers and instructors can use the rubrics as a basis for creating activities for students that will meet General Education competencies. Students can use the rubrics to identify target criteria for creating evidence of each competency. Evaluators will use the rubrics to score student work collected via sampling methods.

These General Education rubrics were originally created at a faculty rubric development workshop directed by D. Switzer (Teacher Education) on Nov. 11, 2005. After instruction on rubric creation, faculty worked in small groups arranged by General Education competency area (Ethical Judgment, for example). These groups were populated by faculty from disciplines with interest in each area. Initial drafts were transcribed and edited by J. Appling (Undergraduate Studies) to standardize rubric levels and language. Additional feedback and content revision was provided by faculty groups formed from members of the Undergraduate Curriculum Committee and the University Assessment Committee. Draft rubrics were edited for language and style by B. Ramirez from English.

These draft rubrics are constructed on a four-level system. The bottom level, 1, represents unsatisfactory work. The upper level, 4, represents exemplary work. Thus only descriptions of levels 2 and 3 are necessary to set the scale. Level 3 represents work that meets general expectations of competency. Level 2 represents work that has components of reasonable performance, but is indicative of a student still developing skill or knowledge in that area.

It is hoped that there will be few level 1 examples of student work. Ideally the largest fraction of students will fall in categories 3 and 4. The populations that exhibit work in levels 1 and 2 could give an indication of areas where attention should be given. Level 2, as an indicator of emerging student ability, helps provide better discrimination in order to improve the usefulness of the scale for program assessment. This is not an interval scale, only ordinal (i.e., the difference between 1 and 2 is not the same as between 2 and 3, etc.). Frequency profiles, rather than means, can be used to indicate changes from year to year.

The Undergraduate Curriculum Committee approved these rubrics at the May 6, 2006 meeting.

\*Subsequent changes to STS and Communication have been made since 2006.

Competency Area: Arts and Humanities

Competency AH1: Demonstrate an ability to analyze and/or interpret the arts and humanities.

Criteria	1	2	3	4
Analysis/interpretation	Purely summary detail. No analysis/interpretation present	Provides a brief overview and analysis/interpretation. Very general in nature. Does not drill down to detailed analysis.	Drills down to specifics and provides detailed analysis/interpretation of several key points in the work(s) discussed.	

Competency Area:  
Competency CC1:

Cross-Cultural Awareness

Explain how aspects of culture are integrated into a comprehensive worldview;  
and then demonstrate how culture influences human behavior.

Criteria	1	2	3	4
Comprehensive Worldview		Provides a brief overview of the impact aspects of the culture being studied on the subject's worldview.	Provides an in-depth, detailed analyses of the impact aspects of the culture being studied has on the subject's worldview.	
Human Behavior		Provides, with minimal detail, citing only one or two examples, the influence one's culture has on human behavior.	Provides in great detail, using multiple examples how aspects of a specific culture can influence human behavior.	

Competency Area: Ethical Judgment

Competency EJ: Demonstrate the ability to identify, comprehend and deal with ethical problems and their ramifications in a systematic, thorough and responsible way.

Criteria	1	2	3	4
Ethical issue		The ability to identify and briefly analyze an ethical issue from the viewpoint of multiple stakeholders.	The ability to identify and thoroughly analyze an ethical issue from the viewpoint of multiple stakeholders balancing the perspectives of each	

Competency Area: Mathematics

Competency M1: Demonstrate mathematical literacy through solving problems, communicating concepts, reasoning mathematically, and applying mathematical or statistical methods, using multiple representations where applicable.

<b>Type of Artifact</b>	<b>1 (Minimal)</b>	<b>2 (Developing)</b>	<b>3 (Substantial)</b>	<b>4 (Complete)</b>
Individual Assignment	<p>Demonstrates math concepts that are not college-level (i.e., basic graphs, basic algebra, etc.)</p> <p>OR</p> <p>Provides an artifact from a college level math course with no work shown (i.e., exam that is only multiple choice)</p>	<p>Demonstrates basic college-level math concepts with explanation (i.e., any evidence from an introductory math course showing development toward higher level thinking)</p>	<p>Provides clear communication for medium to upper level math concepts (math reasoning may be shown by software calculations or hand calculation)</p>	<p>Demonstrates upper level analytical reasoning with work and complete explanations</p> <p>OR</p> <p>Provides research paper authored by student (and possibly faculty) showing upper level math concepts with sources cited.</p>
Group Assignment	<p>Provides group work with below college-level math (with explanation of student's participation in project)</p>	<p>Provides group work that demonstrates college level math skills at minimal level (with explanations of student's participation in project)</p>	<p>Provides group project that demonstrates college level math reasoning, research provided, and sources cited</p>	

## Examples of Competency Score

<p>Score of 1 (Minimal)</p>	<ul style="list-style-type: none"> <li>• Blank Documents (would like to give a 0)</li> <li>• Algebra or arithmetic calculations without interpretation</li> <li>• Statistics calculations or analysis without interpretation</li> <li>• Basic graphs or tables with/without labels and interpretation</li> <li>• Substituting numbers into a simple formula without explanation</li> </ul> <p>Example of Artifact:</p> <ul style="list-style-type: none"> <li>• Calculating loan payments without interpretation</li> <li>• Calculating test statistics without interpretation</li> </ul>
<p>Score of 2 (Developing)</p>	<ul style="list-style-type: none"> <li>• Algebra or arithmetic calculations with labeling and fully developed interpretations</li> <li>• Introductory Statistics calculation or analysis with properly developed interpretations</li> <li>• Complex graphs with labels and interpretation</li> <li>• Calculating values using arithmetic or formulas and fully interpreting those values in context of a problem</li> </ul> <p>Example of Artifact:</p> <ul style="list-style-type: none"> <li>• Calculating loan payments while fully interpreting the pros and cons of those loan payments for a given situation</li> <li>• Calculating test statistics while interpreting the implications of that test statistic on a particular hypothesis test</li> </ul> <p>(Excellent artifacts from MATH 1060, 1070, 1080, 2070 and STAT 3090 will score a 2) (Superior artifacts from MATH 1010, 1020, 1150, 1160, 2160 and STAT 2220, 2300 will score at most a 2)</p>
<p>Score of 3 (Substantial)</p>	<ul style="list-style-type: none"> <li>• Intermediate Statistics Analysis with properly developed interpretations</li> <li>• Fully developed intermediate Calculus problem with interpretation in context of a problem</li> </ul> <p>Example of Artifact:</p> <ul style="list-style-type: none"> <li>• Statistical Analysis with ideas and thoughts beyond scope of course</li> <li>• Multiple Regression Analysis in context of a problem</li> <li>• Analysis of Variance Analysis in context of a problem</li> <li>• Optimization problem interpreted in context of a problem</li> </ul> <p>(Excellent artifacts from STAT 3300 will score a 3) (Superior artifacts from MATH 1060, 1070, 1080, 2070 and STAT 3090 will score at most a 3)</p>
<p>Score of 4 (Complete)</p>	<ul style="list-style-type: none"> <li>• Advanced Statistical analysis of complex problem with interpretation</li> <li>• Research paper authored by student</li> <li>• Upper level mathematical proofs with explanation</li> </ul> <p>(Superior artifact from STAT 3300 may score a 4)</p>

Competency Area: Natural Sciences

Competency NS: Demonstrate scientific literacy by explaining the process of scientific reasoning and applying scientific principals inside and outside of the classroom.

Criteria	1	2	3	4
Major Principles and Theories		Exhibits a limited understanding of the major principles and theories of a particular scientific discipline.	Exhibits a mature understanding of the major principles and theories of a particular scientific discipline.	
Hypotheses		Exhibits undeveloped or unclear hypotheses.	Exhibits skill in formulating complete and clear hypotheses.	
Scientific Approach		Exhibits incomplete designs to test working hypotheses.	Exhibits skill in designing and testing working hypotheses, including use of appropriate experimental controls.	
Data Collection		Exhibits collection of inaccurate or inadequate data to test working hypotheses. Does not include all relevant variables.	Exhibits skill in collecting accurate and objective data to test working hypotheses. Data structures include all relevant variables.	
Data Analysis		Analyses, interpretations, or conclusions are incomplete or inaccurate. Inconsistently uses multi-step approaches.	Analyses, interpretations, or sound scientific conclusions are fully and clearly supported by the data collected. Correctly uses multi-step formalism.	

Competency Area: Science and Technology in Society  
 Competency STS Demonstrate and understanding of issues created by the complex interactions among science, technology and society.

Criteria	1	2	3	4
Interaction between science, technology and society		Identifies a interaction between science or technology and society	Analyzes multiple impacts related to the interaction (such as, local and global impacts, controversies surrounding the interaction, impact on ethical decision-making, the impact of social forces on science and technology etc.)	



Competency Area:  
Competency

Critical Thinking

Demonstrate the ability to assemble information relevant to a significant, complex issue, evaluate the quality and utility of the information, and use the outcomes of the analysis to reach a logical conclusion about the issue.

Criteria	1	2	3	4
Analyze information		Demonstrates basic ability to assemble information to analyze an issue.	Demonstrates sophisticated ability to assemble information to analyze an issue.	
Reaches Logical Conclusions		Demonstrates basic ability to apply analysis to reach a logical conclusion	Demonstrates sophisticated ability to apply analysis to reach a logical conclusion	

Competency Area: Social Sciences

Competency SS1: Use social science methodologies explain the human behavior

Criteria	1	2	3	4
Theory		Exhibits a basic ability to use social science methodologies explain the human behavior	Exhibits a sophisticated ability to use social science methodologies explain the human behavior	

New Version

<b>Social Science Competency with Rubric: Describe and explain human actions using social science concepts and evidence.</b>				
	1	2	3	4
Describes human actions		Provides a superficial description of factors that shape human actions using social science concepts and evidence	Provides an in-depth description of factors that shape human actions using social science concepts and evidence	
Explains human actions		Provides a superficial explanation of factors that shape human actions human actions using social science concepts and evidence	Provides an in-depth explanation of factors that shape human actions using social science concepts and evidence	

Newer version

<b>Social Science Competency with Rubric: Describe and explain human actions using social science concepts and evidence.</b>				
	1	2	3	4
Identifies social science concepts	Utilizes few, if any, relevant social science concepts that shape human behavior	Utilizes a limited number of social factors that shape human behavior	Utilizes many of the relevant social factors that shape human behavior	Displays the characteristics of a level 3 artifact, but with exceptional quality
Applies social science concepts, models, and theories to explain human actions	Fails to go beyond simple description and to make connections between social science concepts and human behavior	Makes limited and/or superficial connections between social science concepts, models, and theories and human behavior	Makes a variety of relevant and meaningful connections between social science concepts, models, and theories and human behavior	Displays the characteristics of a level 3 artifact, but with exceptional quality
Utilizes social science evidence to support conclusions	Lacks evidence to support conclusions and/or reaches logically inconsistent conclusions	Reaches reasonable and logical conclusions based upon limited evidence collected through social science methods	Reaches meaningful and logical conclusions based upon substantial evidence collected through social science methods	Displays the characteristics of a level 3 artifact, but with exceptional quality

## Written and Oral Communication

Effective oral and written communication is the means by which all competencies will be demonstrated.

### Evaluation Criteria

Demonstrates college-level writing/speaking and/or multimedia communication using relevant, appropriately documented sources to express logically organized, fully-developed ideas appropriate for the discipline and genre of the artifact.

### **Communications Rubric**

Doesn't Pass	Artifact is hard to understand because of logical incoherence, poor sentence structure, or serious and widespread spelling, grammatical, word-usage (there-their, affect-effect, then-than) errors. Citations (if needed) are missing or obviously inappropriate.
Pass with Reservations	Artifact has less serious problems, but is still not college-level writing. It may be awkward, difficult to follow, may lack a central thesis, and/or has some spelling, grammatical, and word-usage errors. Citations (if needed) are present, but may not be of appropriate quality or in the right format.
Good	Artifact has college-level writing with logical flow and adequate development of ideas. It has few spelling, grammatical and word-usage errors. Citations (if needed) are appropriate for the course level.
Excellent	Artifact is exceptionally well organized, has superior logical flow and excellent choice of words. It has strong development of ideas. It is devoid of spelling, grammar, and word-usage errors. Citations (if needed) are extensive and extremely relevant to the arguments made in the paper.