

OVERVIEW of RUBRICS DESIGNED to MEASURE CORE COMPETENCIES

The attached rubrics have been designed to measure various aspects of the five core competencies approved by the University of Toledo Faculty Senate in April 2011. These common rubrics allow us to clarify learning objectives, assist with ongoing curricular development, and assess student learning through the collection of meaningful evidence. Drawing heavily from the value-based rubrics developed by the *Association of American Colleges and Universities* (AAC&U), a *Higher Learning Commission* workshop in February 2011, and other institutions, these descriptive rubrics offer explicit statements of performance criteria and levels of achievement. They focus on performance levels, not iterations, and on quality, not quantity. They also allow us to communicate expectations to students and to fulfill institutional promises about the skills, knowledge, and values our students carry forward to other courses, their majors, and life after college. In addition, they have a public component, informing other universities, the community, and our accrediting bodies of our commitment to the continuous assessment and improvement of student learning.

Specifically, each of the attached rubrics consists of 5-10 *elaborations* listed vertically and four *levels of competency* listed horizontally. The instructor/moderator of a learning experience should keep in mind that the intention of competency measurement is different from student grading. In fact, program outcomes are being assessed as well as student development and learning. The Senate and the Academic Administration recognize that these rubrics are pilots to guide further developmental discussion. It may very well be that the elaborations will evolve over iterative steps.

Each rubric and its elaborations are designed to be fully (or nearly fully) independent of discipline. Instructors/moderators should consider measuring two competencies, using a variety (not all) of the offered elaborations. The instructor/moderator has latitude in interpreting the elaborations, and creative variations and assessment tools are strongly encouraged. The levels of competency are more narrowly defined, and follow a simplified Bloom's taxonomy. The instructor/moderator of a competency assessed learning experience is expected to create assessment tools (assignments, exam questions, projects, etc), which measure performance, map to the competencies, and provide meaningful evidence.

The elaboration levels are carefully expressed in measurable terms. Words such as *demonstrates*, *shows*, *uses*, *analyzes*, etc are commonly used, and make it easier for the instructor/moderator to classify an assignment. Adjectives and adverbs are more interpretive, such as *some*, *adequate*, *thorough*, etc. The instructor/moderator has some latitude in judgment, but keep in mind that these rubrics are for developmental assessment over a student's college experience, so a word like *adequate* should be considered as adequate on graduation, rather than adequate for a first year experience.

It is strongly recommended that faculty considering competency based assessment access the AAC&U website at <http://www.aacu.org/>, especially the assessment page at <http://www.aacu.org/resources/assessment/index.cfm>.

Rubric for the Assessment of COMMUNICATION

UT students must demonstrate abilities to communicate meaningfully, persuasively, and creatively with different audiences through written, oral, numeric, graphic, and visual modes.

Elaboration	4: Accomplished (Synthesis)	3: Competent (Application)	2: Developing (Knowledge)	1: Beginning
A: Context	Demonstrates a thorough understanding of context, audience, and purpose that focuses all elements of the work.	Demonstrates understanding of context, audience, and purpose. Aligns task with audience.	Generally aware of context and audience. Begins to show awareness of audience perceptions and assumptions.	Minimally aware of context and audience, responding only to expectations of instructor.
B: Content	Uses appropriate, relevant, and compelling content that illustrates mastery of the subject.	Uses appropriate, relevant, and compelling content to explore ideas that shape the work.	Uses appropriate and relevant content to develop and explore ideas through most of the work.	Uses appropriate and relevant content to develop simple ideas in some parts of the work.
C: Syntax	Uses language and/or visuals that skillfully and clearly communicate meaning and are virtually error-free.	Uses straightforward language and/or visuals that convey meaning to the audience and have few errors.	Uses language and/or visuals that generally convey meaning to the audience with clarity but with some errors.	Uses language and/or visuals that sometimes impede meaning because of errors in usage.
D: Organization	Uses appropriate organization of ideas and/or motifs to provide a compelling conclusion.	Consistently uses appropriate organization of ideas and/or motifs.	Generally uses appropriate organization of ideas and/or motifs.	Inappropriately scatters ideas and/or motifs.
E: Sources and Evidence	Skillfully uses high-quality, credible, and relevant sources and evidence that are appropriate to the genre, with full acknowledgement.	Consistently uses credible, relevant sources or evidence to support ideas within the genre, with full acknowledgement.	Generally uses credible and/or relevant sources or evidence to support ideas within the genre, with acknowledgement.	Attempts to use sources to support ideas in communication.
F: Genre and Disciplinary Conventions	Shows detailed attention to and successful execution of a wide-range of conventions particular to a specific genre or discipline.	Consistently uses important conventions particular to a specific genre or discipline.	Follows expectations appropriate to a specific genre or discipline.	Attempts to use a consistent system for basic organization and presentation.
G: Quantitative	Integrates quantitative material into text clearly and effectively. Suggests further investigations.	Explains content and derivation of quantitative material.	Presents relevant quantitative information with an understanding of content.	Presents quantitative information without clear understanding.
H: Visual or musical	Presents a compelling conclusion through the use of imagery or music.	Verbalizes image or music content and vice versa, with self-reflection.	Properly presents imagery and/or intentions within an image or musical piece.	Uses scattered imagery without a clear focus.

Adapted from *Assessing Outcomes and Improving Achievement* from the AAC&U.

Rubric for the Assessment of CRITICAL THINKING AND INTEGRATIVE LEARNING

UT Students must be able to integrate reasoning, questioning, and analysis across traditional boundaries of viewpoint, practice and discipline.

Elaboration	4: Accomplished (Synthesis)	3: Competent (Application)	2: Developing (Knowledge)	1: Beginning
A: Connection	States issue clearly and describes it comprehensively, delivering all relevant information necessary for full understanding. Evaluates the connections to academic disciplines and experiences.	States, describes, and clarifies issue so that understanding is not seriously impeded by omissions. Effectively selects and develops examples from experience.	States issue but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unknown. Recognizes similarities and differences.	States issue without clarification or description. Recognizes connections with life experiences.
B: Evidence	Takes information from source(s) with enough interpretation/evaluation to develop a comprehensive synthesis. Questions viewpoints of experts thoroughly.	Takes information from source(s) with enough interpretation/evaluation to develop a coherent analysis. Questions expert viewpoints.	Takes information from source(s) with some interpretation/evaluation, but little coherence. Minimally questions expert viewpoints.	Takes information from source(s) as fact without any interpretation /evaluation. Finds examples when prompted.
C: Context and assumptions	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several relevant contexts when presenting a position.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Is aware of some assumptions (sometimes labels assertions as assumptions). Identifies some contexts when presenting a position.
D: Perspective	Specific position is imaginative, taking into account complexities of the issue Acknowledges limits of the position. Synthesizes others' points of view within the position.	Specific position (perspective, thesis, hypothesis) takes into account the complexities of the issue. Others' points of view are acknowledged within position.	States specific position (perspective, thesis, hypothesis) while acknowledging different sides of an issue. Analyzes evidence on all sides of issue.	States position (perspective, thesis, hypothesis), but is simplistic and obvious. Supports with some evidence.
E: Conclusions	Conclusions and related consequences and implications are logical and reflect student's informed evaluation and ability to place evidence and perspectives in priority order.	Logically ties conclusions to a range of information, including opposing viewpoints. Clearly identifies related consequences and implications.	Logically ties conclusions to information, although information may be selective. Clearly identifies some related consequences and implications. Articulates strengths and challenges.	Inconsistently ties Conclusions to some of the information discussed. Oversimplifies consequences and implications.
F: Self reflection	Envisions a future self based on past experiences, that have occurred across multiple and diverse contexts.	Evaluates changes in own learning, recognizes complex contextual factors.	Recognizes role of own perspective and prior experience.	Describes own performance with general descriptions of success and failure.

Adapted from two of the AAC&U rubrics: Critical Thinking and Integrative Learning [<http://www.aacu.org/value/abouttherubrics.cfm>]. It does not include all parts of the Integrative Learning rubric but some areas were added to the critical thinking rubric to attempt to integrate the two.

RUBRIC for the ASSESSMENT of INFORMATION LITERACY

UT students must demonstrate the ability to find, organize, critically assess, and effectively use information to engage in advanced work in a challenging field of study. Students should demonstrate responsible, legal, creative and ethical use of information.

Elaboration	4: Accomplished (Synthesis)	3: Competent (Application)	2: Developing (Knowledge)	1: Beginning
A: Content	Creates original thesis statements or focused research questions. Effectively determines key concepts. Selects information that directly relates to concepts and/ or answers research questions.	Adequately defines the scope of the research question. Selects and interprets the collected information appropriately.	Defines the scope of the research question incompletely (parts are missing, remains too broad or too narrow, etc.). Determines key concepts. Selects information that partially relates to the research question.	Has difficulty defining the scope of the research question and determining key concepts. Selects information (sources) that marginally relate to the research question.
B: Access	Accesses information using effective, well-designed search strategies from the most appropriate information sources.	Accesses information using a variety of search strategies and some relevant information sources. Demonstrates ability to refine search.	Accesses information using simple search strategies, retrieving information from limited and similar sources.	Selects and accesses general resources that lack relevance and quality.
C: Organization	Effectively organizes and uses discipline-specific information sources to support appropriate purpose. Communicates and synthesizes information to achieve a specific purpose with clarity and depth.	Communicates, organizes and synthesizes information from sources. Achieves intended purpose.	Effectively organizes and uses general information from sources. Minimally synthesizes information.	Uses information from sources, however, information is fragmented and/or used inappropriately (misquoted, taken out of context, incorrectly paraphrased, etc.) so does not achieve intended purpose.
D: Assessment	Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.	Identifies own and others' assumptions and several other contexts when presenting a position. Cross references multiple sources.	Questions some assumptions. Identifies several relevant contexts when presenting a position. May be more aware of others' assumptions than one's own (or vice versa).	Shows an emerging awareness of assumptions. Begins to identify some contexts when presenting a position.
E: Ethical use	Thoroughly acknowledges sources through careful incorporation of citations, footnotes, endnotes, or other widely accepted documentation style. Includes complete bibliographic information formatted with near complete accuracy.	Acknowledges sources and uses the correct citation style for formatting. Fully understands of the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.	Understands source acknowledgement in general. Uses appropriate citation, but formatting needs improvement. Mostly understands the ethical and legal restrictions on the use of published, confidential, and/or proprietary information.	Weakly understands ethical and legal restrictions on the use of published, confidential, and/or proprietary information. Is unclear about source acknowledgement, using inaccurate citations and inappropriate citation style.

Adapted from the AAC&U rubric for information literacy [<http://www.aacu.org/value/abouttherubrics.cfm>]

Rubric for the Assessment of PERSONAL and SOCIAL RESPONSIBILITY

UT students must demonstrate understanding and critical engagement in ethical, cultural and political discourse and capacity to work productively as a community member committed to the value of diversity and the imperatives of justice.

Elaboration	4: Accomplished (Synthesis)	3: Competent (Application)	2: Developing (Knowledge)	1: Beginning
A: Social Inequality	Shows how social inequality undermines quality of life for all, not just the dispossessed. Actively promotes social equality.	Understands the role of ideology in dividing groups and protecting the interests of principal beneficiaries.	Generally understands processes of who gets what, when, and how.	Recognizes some social groups systematically get fewer valued social rewards (e.g., quality education and safety) than others.
B: Cultural awareness	Uses alternate cultures including history, values, politics, beliefs, practices, and communication styles in making arguments.	Fully understands cultural complexity. Acknowledges the role of language in cultural bias.	Understands complexity of elements important to members of other cultures and why they ascribe value to those elements.	Understands some elements important to members of other cultures.
C: Cultural self-awareness	Sees self as one among many. Appreciates and is comfortable with the roles of globalization and new media in transforming our self-awareness.	Demonstrates new perspectives about own cultural rules and biases. Actively searches for new perspectives, beauty, and tools outside own cultural group.	Identifies own cultural rules and biases. Recognizes value and beauty in cultural practices and products of other groups.	Minimally aware of own cultural rules and biases.
D: Ethical Reasoning	Applies ethical perspectives/concepts to ethical questions and analyses implications of the applications.	Recognizes complex, multilayered ethical issues. Applies ethical perspectives/ concepts to an ethical question.	Applies ethical perspectives/concepts to an ethical question, but the application is limited.	Recognizes basic and obvious ethical issues. Approaches ethical questions with concrete answers.
E: Ethical self-awareness	Places core beliefs in a spectrum of valid ethical viewpoints.	Analyzes core beliefs and their origins.	States core beliefs and their origins.	States own core beliefs.
F: Civic Knowledge	Depth of knowledge enables persuading others to take up civic engagement.	Analyzes knowledge from academic study/field/discipline concerning civic engagement.	Identifies inter-relations among civic structures, both local and national.	Identifies civic structures from academic study.
G: Civic Engagement	Works collaboratively across and within community contexts to achieve a civic aim. Knows how to build civic organizations.	Engages in civic activities with a growing sense of civic identity and commitment.	Engages in civic activities generated from course requirements rather than sense of civic identity.	Provides little evidence of experience in civic-engagement activities or connection to civic identity.
H: Diversity	Focuses on individual character and ability rather than social group membership. Promotes others' engagement with diversity.	Understands ethnocentrism and how it devalues other cultures and social groups. Appreciates how drawing from other groups can enrich one's life.	Shows awareness that own attitudes may be different from those of other communities. Exhibits some curiosity about learning from diverse groups.	Expresses attitudes and beliefs as an individual from a one-sided view. Is indifferent or resistant to what can be learned from diverse communities.
I: Sense of justice	Acts purposefully on a well reasoned sense of justice. Acts as if one were consistently behind "the veil of ignorance."	Analyzes own views of justice, discrimination, and affirmative action, recognizing that others have different viewpoints.	Aware of differences in how justice is perceived and applied across different communities.	Aware of rights protected in the United States Constitution.
J: Socio/political awareness	Acts purposefully to advance a well reasoned political agenda around the imperative of justice, knowing that others may have valid disagreements.	Analyzes own views on socio-political systems given evidence from other countries. Imagines realistic ways of improving our democratic system.	Aware of other democratic systems and social welfare practices. Questions the limitations of our democratic system.	Aware of the political practice of democracy and social welfare in the United States.

Adapted from several separate AAC&U [<http://www.aacu.org/value/abouttherubrics.cfm>] rubrics, and those of other universities.

Rubric for the Assessment of SCIENTIFIC and QUANTITATIVE REASONING and LITERACY

UT students must demonstrate the capacity to apply mathematical reasoning and scientific inquiry to diverse problems.

Elaboration	4: Accomplished (Synthesis)	3: Competent (Application)	2: Developing (Knowledge)	1: Beginning
A: Scientific Reasoning	Derives relational concepts from data.	Describes and applies relational concepts.	Demonstrates awareness of observables.	Explains phenomena with preconceptions.
B: Scientific Literacy	Understands the modeling nature of science and defends the major principles of a discipline.	Understands conservation laws and the difference between "law" and "fact" (observable).	States basic principles in one or more disciplines.	Distinguishes among disciplines.
C: Scientific Process	Understands the predictive and testable nature of all scientific outcomes.	Understands the relations between evidence, hypothesis, and theory.	States evidence pertaining to a phenomenon.	Aware of evidence-based inference
D: Measurement	Understands the difference between random and systematic error, and can determine error estimates for a complex outcome.	Understands elementary statistical analysis of similar measurements.	Understands measurable quantities and units of measurement.	Makes simple measurements.
E: Assumptions	Aware that the confidence in an outcome is limited by the accuracy of the assumptions.	Appropriately defends assumptions in an analysis.	Describes assumptions in an analysis. Aware of implicit assumptions.	Demonstrates some awareness of explicit assumptions
F: Representation and Interpretation	Infers logical consequences from mathematical information.	Converts relevant information into accurate, desired mathematical portrayals.	Freely uses symbolic representation. Manipulates equations and prepares graphs.	Understands simple equations, graphs, diagrams, tables, etc.
G: Calculation	Estimates results as a check on formal calculations. Understands iteration and limit analysis.	Sets up and solves equations involving powers and other mathematical functions.	Understands scientific notation and performs simple functional calculations.	Performs simple arithmetic calculations.
H: Application/Analysis	Determines and acquires data required to test a hypothesis and draws insightful, qualified conclusions.	Performs independent analysis of data and draws reasonable and appropriately qualified conclusions.	Performs quantitative analysis of data by rote instruction and draws plausible conclusions.	Classifies experimental data.
I: Communication	Integrates quantitative material into text clearly and effectively. Suggests further investigations. Properly cites all sources.	Explains content and derivation of quantitative material. Properly cites all sources.	Presents relevant quantitative information with an understanding of content. Cites sources.	Presents quantitative information without clear understanding.
J: Social Responsibility	Understands the role and ethical use of science in addressing global problems.	Articulates major scientific and technological advances and their effect on society.	Distinguishes the ethics of studying a concept (e.g. genetics) vs. using or manipulating the concept.	Presents some influence of STEM on his or her personal life.

Adapted from the AAC&U rubric for quantitative literacy [<http://www.aacu.org/value/abouttherubrics.cfm>] and some suggestions from the rather extensive list of rubrics at Clemson University [<http://www.clemson.edu/administration/ugs/ge/GenEdRubrics%20approved%20October%202007.htm>].