

## UTC General Education Assessment Plan Overview

The plan to evaluate UTC's general education program is multi-faceted and attempts to pull from multiple sources to validate and triangulate the results.

We are using a four-pronged approach that we hope will give us data about whether our certified general education courses meet the needs for the overall general education competencies, whether the student learning from our general education program meets the overall competencies set forth by the general education program, and whether UTC's general education program makes a difference in the student learning process and outcomes. As an additional aspect of this first year of assessment activities, we will also be evaluating the general education assessment plan itself.

We will use the following information and data to assess UTC's general education program.

- ACT CAAP (Collegiate Assessment of Academic Proficiency) test data. Used to compare results from students who have taken our general education program with students who have transferred general education courses in to UTC. These data should be able to tell us if accepting transfer credit for our general education program is meeting our competencies for the general education program.
- A selection of entering freshmen and a sample of upper-level students will take ETS MAPP (Measure of Academic Proficiency and Progress) standardized test. Results from this test from the two sample populations will provide measures of student performance on the general education competencies of critical thinking, reading, mathematics and writing. In addition, the test includes some content scores for the humanities, social sciences and natural sciences. Scores from this test should allow us to identify any differences between UTC and transfer students and will be collected in a way to allow comparison between freshmen and upper-level students on each of the measures.
- Data from the National Survey of Student Engagement (NSSE) given in 2004, 2005, and 2006 will be used to assess the extent to which both freshmen and seniors are engaged in the learning process.
- Faculty reviewers will review and evaluate student work from a selection of approved general education courses from each general education category. The reviewers will evaluate the student work in each category using a consistent evaluation rubrics derived from the general education competencies for each category. Faculty reviewers will be trained how to use the rubrics and the initial round of reviews will also be used to validate the rubric. In addition, inter-rater reliability will be computed to determine whether all reviewers are scoring in a consistent fashion.

In Fall 2009, the General Education Committee will make a preliminary report to the Faculty Senate regarding the data obtained from these assessment activities. The Committee will also lead the discussions with the Faculty Senate, Administration, and the broader campus community concerning the course of action to be taken on the preliminary findings, both with respect to what the data suggest about the status of general education at UTC and to what they reveal about the assessment process itself.

## **Course-Based Assessment: Guidelines and Evaluation Rubrics\***

A central component of the program for assessing general education at UTC is the evaluation of student work collected into an “institutional portfolio.” Accordingly, a small number of course sections from each category in the general education curriculum will be selected each year to contribute student work to the portfolio. Upon collection, the work will be scored by faculty scoring teams according to the rubrics established for the relevant general education category.

In preparation for the launch of the portfolio assessment activities in 2008-09, the General Education Committee is pleased to share with the campus community working drafts of the evaluation rubrics for each of the six category areas. It is the Committee’s hope that the rubrics will be refined and improved in the coming months as a result of both feedback from the campus community and practical experience using the rubrics during this first round of portfolio assessment.

With this goal in mind, the Committee would also like to offer the following remarks on the selection of artifacts for the portfolio and on the rubrics themselves.

### Selection of Student Work as Assessment Artifacts

Instructors need to keep three primary considerations in mind as they determine what student work to submit for assessment:

- The work must allow students to demonstrate the content knowledge and critical skills listed as “core competencies.”
- The work would require synthesis or evaluation of specific subject matter, while also providing students opportunities to compare and contrast, analyze relationships, evaluate the strength and weaknesses of arguments, and/or describe the implications of research findings or data.
- The work would require students to formulate their ideas in their own words using statements in English prose and/or symbolic languages (e.g., equations).

Overall, papers (including essays, research projects, laboratory reports), portfolios of written work, and essay exams tend to offer the greatest promise as assessment items. Short answer test questions can also work, so long as they sufficiently address each of the three considerations listed above.

Instructors are free to select either a single assignment, a combination of assignments (ideally, no more than two), or parts of one or more assignments (again, ideally no more than two) for evaluation. In making this choice, instructors should keep in mind that, where only three core competencies are listed in the category rubric, the student work should be able address all three. Where there are more than three core competencies in the category rubric, the work submitted should be able to address, at least, either 3 of the 4 or 4 of the 5 core competencies.

### Remarks on the Rubrics

In developing the evaluation rubrics, the General Education Committee strove to adopt as consistent an approach as possible to each of the six general education categories. For each core competency area, the submissions will be scored as “exemplary”, “satisfactory”, or “unacceptable.” The definition of each of these performance levels is partly structured around Bloom’s Taxonomy, a widely-used approach to categorizing learning objectives. But, as necessary, it also includes

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\* This text is taken from the portion of the General Education Committee’s website devoted to assessment: <http://www.utc.edu/Administration/GeneralEducation/Assessment/GERubrics.php>

explanatory comments and material drawn from the competency statements and/or the category objectives approved by the faculty in 1998 (as listed in the “Green Book”).

With respect to the term “core competency” itself, a few words are also in order. In short, the Committee decided against making the competency statements themselves the criteria for evaluation. In part, this choice reflected the existence of internal redundancies, that is, some of the statements just call for the students to demonstrate the same knowledge or skill, but at different levels. But it also reflected the fact that some statements combined objectives in a way that seemed to stand in the way of effective evaluation. Instead, the Committee chose to identify the core knowledge and skills presented in the competency statements and develop the evaluation rubrics around these core areas.

Finally, a note of explanation concerning the numbers between parentheses following each of the core competencies. These numbers indicate which of the overall general education program competencies are being addressed by a particular competency area. A list of these competencies is available at: <http://www.utc.edu/Administration/GeneralEducation/Assessment/GECompetencies.pdf>

To borrow an image from the world of computer science, the evaluation rubrics that appear below are “betaware.” They are, the General Education Committee believes, ready for testing, but may well have weaknesses that will prevent them from fulfilling their intended purposes both short and long term. With that in mind, the Committee asks the UTC community to help “test” these documents by reviewing them and thinking about how they would work to evaluate actual General Education courses.

Please address any and all feedback on the rubrics (or the larger institutional portfolio project) to Tony Steinhoff, Chair of the General Education Committee for 2008-09: 425-4581 (phone); or [Anthony-Steinhoff@utc.edu](mailto:Anthony-Steinhoff@utc.edu) (email).

Draft Versions of the Evaluation Rubrics for the Six General Education Categories:

*(on the website, these are hyperlinks; the pages to which they are linked appear on the following pages)*

- Behavioral and social sciences
- Cultures and civilizations
  - Western humanities
  - Non-western cultures and civilizations
  - World civilizations
- Humanities and fine arts
- Math and statistics
- Natural sciences
- Rhetoric and composition

## Overview of Course-Based Assessment Activities, 2008-09

During the 2008-09 academic year, course-based assessment activities will be conducted in all six general education categories. Materials from Fall 2008 coursework will be gathered from a random selection of courses (course sections) approved for the categories of a) behavioral and social sciences, b) cultures and civilizations, and c) natural sciences. During Spring 2008, student work will be collected from courses approved for the categories of a) humanities and fine arts, b) math and statistics, and c) rhetoric and composition.

### Fall 2008 Courses/Course Sections

#### Behavioral and social sciences (SS)

- ECON 102 (006): Principles of Economy/Micro - Prof. Pratt
- POLS 101 (005): American Government - Prof. Brodsky
- SOC 215 (007): Sociology of the Family - Prof. LeMoyne

#### Cultures and civilizations (WC, WH, NW)

- ENGL 113 (018): Western Humanities I - Prof. Lewis
- POLS 104 (001): Politics, Culture & Society - Prof. Wilson
- HIST 104 (006): World Civilizations II - Prof. White

#### Natural Sciences (SS) (total: 105 students)

- BIOL 210 (001): Microbiology & Health - Prof. Bell
- PHYS 103 (001): General Physics, Mechanics and Heat - Prof. Marlowe
- ESC 110 (001): Conservation of Biodiversity - Prof. Reynolds

### Spring 2009 Courses/Course Sections

#### Humanities and fine arts (HU, FA)

- ART 215 (002): History of Western Art, Renaissance to Present - Prof. Townsend
- ENGL 219 (001): African American Literature - Prof. Braggs
- MUS 111 (004): Introduction to Music – Prof. Kile

#### Math and statistics (MA, ST)

- BMGT 211 (003): Statistical Methods for Business - Dr. Roth
- MATH 151 (003): Calculus I - Prof. Belinsky
- MATH 123 (003): Math in Our Modern World - Prof. Darken

#### Rhetoric and composition (RC)

ENGL 122 (Dr. Ingraham will create a sample drawing on students in all the Spring 122 sections)

### Scoring Teams

The student work submitted for each of the general education categories will be evaluated by six teams (one for each category), each one composed of three tenure-line teaching faculty. While the process of recruiting individuals for these teams began with randomly-generated lists of faculty, the specific composition of the teams will reflect the following factors: 1) each team will have at least one faculty member who regularly teaches general education courses; 2) no more than one member of any department will sit on any given team; 3) no team member will belong to a department that contributes courses to the particular category; 4) taken together, the six teams will include from all four UTC Colleges.

## UTC GENERAL EDUCATION COMPETENCIES

### *I. OVERALL PROGRAM*

Competencies	Measures
1. Communicate effectively in both speech and in writing.	TBA
2. Reason and think clearly.	TBA
3. Employ qualitative and quantitative information to define and defend viewpoints, solve problems, and make decisions.	TBA
4. Develop a comparative, historical, and global perspective on the diversity of human experience.	TBA
5. Recognize important issues confronting human society and the human condition.	TBA
6. Understand major scientific and technological influences on society.	TBA
7. Recognize the contributions of collaborative and multidisciplinary approaches to intellectual investigation and problem solving.	TBA

### *II. KNOWLEDGE AREAS/GENERAL EDUCATION CATEGORIES*

Knowledge Area/Gen Ed Category	Competencies (relevant overall competencies in parenthesis)	Measures
<b>Behavioral and social sciences</b>	Discuss how human beings function as individuals, citizens and members of groups using the major concepts and theories of at least one behavioral or social science (1, 2, 4, 5, 7).	Course embedded
	Evaluate theories, methods, findings, and applications of behavioral and social science research (2, 3, 4, 5, 7).	Course embedded
	Demonstrate how individuals and society are affected by the complexity and interdependencies of the contemporary world (1, 2, 3, 4, 6, 7).	
	Understand and apply the methods that scholars in the behavioral and social sciences use to study social phenomena (2, 3, 4, 6).	Course embedded
	Explain the broader social impact of behavioral and social scientific research (1, 2, 3, 4, 5, 7).	Course embedded
<b>CC: Western humanities</b>	Describe the great ideas, creative achievements, and modes of thinking in the western world (1, 2, 3, 4, 5).	Course embedded
	Analyze great works in the western artistic, literary, musical, philosophical, and religious traditions within their historical context (1, 2, 3, 4, 5, 7).	Course embedded
	Recognize the western tradition's contributions to the shaping of contemporary culture and society (2, 3, 4, 5, 7).	Course embedded

<b>CC: Non-western cultures and civilizations</b>	Describe the major characteristics and achievements of one or more non-western cultures and civilizations within their historical context (1, 2, 3, 4, 5, 7).	Course embedded
	Demonstrate how the histories, philosophies, and religions of non-western cultures shaped the development of their political, social, economic, and aesthetic values (1, 2, 3, 4, 5, 7).	Course embedded
	Compare non-western and western world views, modes of thought, and forms of social and cultural practice (2, 3, 4, 5, 7).	Course embedded
<b>CC: World civilizations</b>	Describe major social, religious, political, economic, scientific/technological, and aesthetic developments in the world's history from both global-comparative and culturally-specific perspectives (1, 2, 3, 4, 5, 7).	Course embedded
	Demonstrate how change over time, contingency, and cause-and-effect relationships shape historical understanding (1, 2, 3, 4, 7).	Course embedded
	Examine how cross-cultural forces have influenced the evolution of the world's civilizations and explain how different cultures have responded to similar ideas, inventions, and institutions (1, 2, 3, 4, 5, 6, 7).	Course embedded.
<b>Humanities and fine arts</b>	Identify significant developments and achievements in the humanities and fine arts and place them in their historical context (1, 2, 3, 4, 5, 7).	Course embedded
	Explain the relationship between creative expression and human experience and recognize how this relationship has evolved over time (1, 2, 3, 4, 5, 7).	Course embedded
	Examine value and belief systems and explain their role in humanistic inquiry and expression (1, 2, 3, 4, 5, 7).	Course embedded
	Evaluate the meaning of significant events and creative works using forms of reasoning, analysis, and exposition appropriate to the humanities and fine arts (1, 2, 3, 4, 5, 7).	Course embedded
<b>Mathematics and statistics</b>	Employ quantitative concepts and methods to solve mathematical and statistical problems (1, 2, 3, 6, 7).	Course embedded/test?
	Construct and interpret mathematical and statistical models of real world and abstract phenomena (1, 2, 3, 5, 6, 7).	Course embedded/test?
	Communicate mathematical/statistical knowledge using appropriate notation and vocabulary (1, 2, 3, 6).	Course embedded/test?
	Recognize the limits of mathematical and statistical methods in evaluating human problems (1, 2, 3, 5, 6, 7).	Course embedded
<b>Natural sciences</b>	Identify and apply the theories and methods scientists use to explore natural phenomena (2, 3, 6, 7).	Course embedded
	Recognize and place in historical context the achievements of the human mind in comprehending the natural/physical world and the universe (1, 2, 3, 4, 5, 6, 7).	Course embedded
	Explain how creativity and logical reasoning influence the development of scientific knowledge (1, 2, 3, 5, 6, 7).	Course embedded
	Describe the strengths and limitations of empirical approaches to understanding and influencing the natural world (1, 2, 3, 6, 7).	Course embedded
	Discuss how scientific and technological developments have both benefited and created significant concerns for human society (1, 2, 3, 5, 6, 7).	Course embedded

<b>Rhetoric and composition</b>	Recognize that writing always takes place within specific rhetorical situations (1, 2, 3).	Course embedded
	Compose and revise texts for a variety of purposes and audiences, employing standard documentation styles and Standard American English (1, 2, 3, 7).	Course embedded
	Conduct research, summarize and evaluate ideas, develop arguments, and organize supporting details (1, 2, 3, 7).	Course embedded
	Read accurately and critically, recognizing assumptions, implied statements, and differences between fact and opinion (1, 2, 3, 7).	Course embedded

# EVALUATION RUBRIC FOR UTC GENERAL EDUCATION ASSESSMENT

<b>Category: Behavioral and Social Sciences</b>					
<b>Core Competency</b>	<b>5-4 Exemplary</b>	<b>3-2 Satisfactory</b>	<b>1-0 Unacceptable</b>	<b>NA</b>	<b>Score</b>
Demonstrate disciplinary knowledge of human/social activity and behavior.	Analyzes and evaluates how humans act as individuals and as members of groups and societies. Is capable of describing major concepts and disciplinary theories and applying them to investigate human and social phenomena.	Describes basic characteristics of human and social behavior. Is able to differentiate between actions of individual and groups. Familiar with major disciplinary concepts and theories, even if not explicitly named.	Displays little to no awareness of the specific disciplinary insights or approaches to the examination of human and social activity and behavior. Has difficulties differentiating between actions of individuals and groups.		
Demonstrate knowledge of behavioral/social science research methods.	Clearly understands and appropriately applies the methods and models used to examine human behavior and social life. Evaluates the suitability of particular approaches to examining specific human/social phenomena. Shows awareness for the limitations of disciplinary models.	Generally understands the principles and methods underlying behavioral and social science research, but has difficulty in applying them to the study of specific problems.	Demonstrates little to no awareness of the principles underlying behavioral/social science research. Is largely unable to apply methods to the study of specific problems.		
Demonstrate knowledge of the impact of behavioral/social science research.	Analyzes and evaluates major research findings from a behavioral/social science discipline. Interprets persuasively, using specific examples, the implications of these findings for both the discipline and the general public.	Describes major research findings from a behavioral or social science discipline, but without grasping many of the finer points. Identifies some of the implications of these findings, but mostly at a general level. Can discuss either ramifications for the discipline or the general public, but not both.	Has, at best, a limited awareness of major research findings in the social and behavioral sciences. Discussion of their broader implications is weak to non-existent.		
Demonstrate knowledge of the contemporary relevance of the social/behavioral sciences.	Appropriately selects and applies behavioral/social science models and theories to examine contemporary issues. Analyzes using specific examples how the complexities of the contemporary world are affecting human behavior and social life.	Identifies relevant behavioral/social scientific theories and models for discussing contemporary issues, but has difficulties in applying them. Is aware of how contemporary conditions affect human behavior and social life, but discussion remains general.	Discusses contemporary issues from the perspective of a specific behavioral/social science only with great difficulty, when at all. Has little to no understanding of how the contemporary world affects individuals and societies.		
<b>Total:</b>					

## EVALUATION RUBRIC FOR UTC GENERAL EDUCATION ASSESSMENT

<b>Category: Cultures and Civilizations (Western Humanities)</b>				
<b>Core Competency</b>	<b>5-4 Exemplary</b>	<b>3-2 Satisfactory</b>	<b>1-0 Unacceptable</b>	<b>Score</b>
Demonstrate knowledge of great ideas, creative achievements, and modes of thinking in the western world.	Analyzes and evaluates great ideas, creative achievements, and modes of thinking in the western world.	Identifies and describes great ideas, creative achievements, and modes of thinking in the western world.	Displays little to no awareness of the great ideas, creative achievements and modes of thinking in the western world.	
Demonstrate knowledge of the historical context of great works in the western artistic, literary, musical, philosophical, and religious traditions.	Evaluates and explains the relationship between great creative works in the western tradition western civilization and their historical “contexts.”	Identifies and describes the historical context of great works in the western tradition.	Displays little to no awareness of the historical context of great works in the western tradition.	
Demonstrate knowledge of the western tradition’s contributions to contemporary culture and society.	Analyzes and evaluates the western tradition’s contributions to the shaping of contemporary culture and society.	Identifies and describes how the western tradition has helped shape contemporary culture and society.	Displays little to no awareness of how the western tradition has helped shape contemporary culture and society.	
<b>Total:</b>				

## EVALUATION RUBRIC FOR UTC GENERAL EDUCATION ASSESSMENT

<b>Category: Cultures and Civilizations (Non-Western Civilizations)</b>					
<b>Core Competency</b>	<b>5-4 Exemplary</b>	<b>3-2 Satisfactory</b>	<b>1-0 Unacceptable</b>	<b>NA</b>	<b>Score</b>
Demonstrate knowledge of non-western civilizations.	Analyzes and evaluates the major characteristics and achievements of at least one non-western civilization.	Describes major characteristics and achievements of at least one non-western culture or civilization.	Shows little or no awareness of the characteristics and achievements of a non-Western culture or civilization.		
Demonstrate knowledge of historical context.	Explains and evaluates the historical context of the major characteristics and achievements of non-western cultures or civilizations.	Describes the historical context of the major characteristics and achievements of non-western cultures or civilizations.	Displays little or no awareness of the historical context of the major characteristics and achievements of a non-western culture or civilization.		
Demonstrate knowledge of humanistic foundations of non-western values.	Analyzes and evaluates how the histories, philosophies, and/or religions of non-western cultures have shaped the development of their political, social, economic, and/or aesthetic values.	Describes how the histories, philosophies, and/or religions of non-western cultures have shaped the development of their political, social, economic, and/or aesthetic values.	Displays little or no awareness of how the histories, philosophies, and/or religions of non-western cultures have shaped the development of their political, social, economic, and/or aesthetic values.		
Demonstrate knowledge of similarities in and differences between non-western and western cultures and civilizations.	Analyzes and evaluates points of similarity and difference between non-western and western world views, modes of thought and/or forms of social and cultural practices.	Is aware of similarities in and differences between non-western and western world views, modes of thought and/or forms of social and cultural practices.	Displays little or no awareness of similarities in and differences between non-western and western world views, modes of thought and/or forms of social and cultural practices.		
<b>Total:</b>					

# EVALUATION RUBRIC FOR UTC GENERAL EDUCATION ASSESSMENT

<b>Category: Cultures and Civilizations (World Civilizations)</b>					
<b>Core Competency</b>	<b>5-4 Exemplary</b>	<b>3-2 Satisfactory</b>	<b>1-0 Unacceptable</b>	<b>NA</b>	<b>Score</b>
Demonstrate knowledge of major developments in the histories of the world's civilizations and cultures.	Analyzes and evaluates major social, religious, political, economic, scientific/technological, and aesthetic developments in the world's civilizations that were significant during the period covered by the course.	Identifies and describes major social, religious, political, economic, scientific/technological, and aesthetic developments in the world's civilizations that were significant during the period covered by the course.	Displays little to no awareness of major social, religious, political, economic, scientific/technological, and aesthetic developments of the significant world civilizations during the period covered by the course.		
Demonstrate knowledge of major world historical developments that were cross-cultural and/or global in nature.	Analyzes and evaluates major social, religious, political, economic, scientific, and aesthetic developments in the world's history that were cross-cultural and/or global in nature.	Identifies and describes major social, religious, political, economic, scientific, and aesthetic developments in the world's history that were cross-cultural and/or global in nature.	Displays little to no awareness of developments in the world's history that were cross-cultural and/or global in nature.		
Demonstrate a knowledge of how world civilizations responded to similar ideas, inventions, and institutions.	Compares and contrasts how different civilizations have responded to similar ideas, invention, and institutions and explains the consequences of these responses.	Identifies and describes the different ways in which civilizations have responded to similar ideas, inventions, and institutions, but provides only a general discussion of the consequences of such responses.	Displays little to no awareness of how different civilizations have responded to similar ideas, inventions, or institutions, or the consequences ensuing from their choices.		
Demonstrate an ability to think historically.	Incorporates a clear awareness of such factors as change over time, contingency, and cause-and-effect relationships in the analysis and evaluation of major world historical developments and events	Describes major world historical developments and events with a general understanding of the importance of such factors as change over time, contingency, and/or cause-and-effect relationships.	Displays little to no grasp for how such factors as change over time, contingency, and cause-and-effect relationships shape the understanding of major world historical developments and events.		
<b>Total:</b>					

## EVALUATION RUBRIC FOR UTC GENERAL EDUCATION ASSESSMENT

<b>Category: Humanities and Fine Arts</b>					
<b>Core Competency</b>	<b>5-4 Exemplary</b>	<b>3-2 Satisfactory</b>	<b>1-0 Unacceptable</b>	<b>NA</b>	<b>Score</b>
Demonstrate knowledge of significant developments and achievements in the humanities or fine arts (1, 2, 3, 4, 5, 7).	Analyzes and evaluates significant developments and achievements in a humanities or fine arts discipline with the aid of specific examples.	Describes or identifies significant developments and achievements in a humanities or fine arts discipline.	Displays little to no awareness of significant developments or achievements in a specific humanities or fine arts discipline.		
Demonstrate knowledge of the historical context of significant developments and achievements in the humanities or fine arts (1, 2, 3, 4, 5, 7).	Analyzes and evaluates the historical context of significant developments and achievements in the humanities or fine arts.	Describes the historical context of significant developments and achievements, but mainly on a general level.	Displays little to no awareness of the historical context of significant developments and achievements.		
Demonstrate knowledge of the relationship between creative expression and human experience and its evolution over time (1, 2, 3, 4, 5, 7).	Analyzes and evaluates the relationship between creative expression and human experience. Uses specific examples to explain how this relationship (as indicated by major ideas, concepts, forms, practices) has evolved over time.	Describes the relationship between creative expression and human experience. Discusses how this relationship has evolved over time, but the submission is generally lacking in specific examples and detail.	Displays little to no awareness of the relationship between creative expression and human experience, nor of how this relationship has evolved over time within the context of a specific humanistic/fine arts discipline.		
Demonstrate knowledge of value and belief systems and their ramifications for humanistic inquiry and expression (1, 2, 3, 4, 5, 7).	Compares, contrasts, or evaluates major value and/or belief systems and explains their role in shaping humanistic inquiry and/or creative expression.	Describes major value and/or belief systems and discusses, albeit in a fairly general manner, their role in shaping humanistic inquiry and/or creative expression	Displays little to no awareness of major value and/or belief systems and how they shape humanistic inquiry and/or creative expression.		
Demonstrate knowledge of disciplinary methods in the humanities or fine arts (1, 2, 3, 4, 5, 7).	Analyzes and explains the meaning of significant events, developments, and/or creative works using forms of reasoning, analysis and exposition used by a specific humanities or fine arts discipline.	Describes the meaning of significant events, developments, and/or creative works in ways that show a general familiarity with forms of reasoning, analysis and exposition used by a specific humanities or fine arts discipline.	Discusses significant events, developments, and/or creative works using forms of reasoning, analysis and exposition used by a specific humanities or fine arts discipline but only with great difficulty, when at all.		
<b>Total:</b>					

# EVALUATION RUBRIC FOR UTC GENERAL EDUCATION ASSESSMENT

Category: Math and Statistics					
Core Competency	5-4 Exemplary	3-2 Satisfactory	1-0 Unacceptable	NA	Score
Demonstrates knowledge of quantitative and/or statistical concepts and methods (1, 2, 3, 6, 7).	Explains and applies competently basic quantitative and/or statistical concepts. Is aware of the historical, logical, or intuitive aspects of the development of significant mathematical or statistical concepts.	Is familiar with basic quantitative and/or statistical concepts and can apply them, but not always correctly or consistently. Has difficulty appreciating the historical, logical, or intuitive aspects of the development of significant mathematical or statistical concepts.	Displays little awareness of basic quantitative and/or statistical concepts and has great difficulty applying them successfully or understanding the context of their development.		
Demonstrates knowledge of quantitative and/or statistical problem solving strategies (1, 2, 3, 6, 7).	Poses relevant questions, identifies and analyzes critical information, and/or tests hypotheses and conclusions in the course of evaluating quantitative and/or statistical problems. Approach to problem solving reflects solid mathematical/statistical reasoning skills and logical rigor.	Has a basic understanding of and ability to evaluate quantitative and/or statistical problems by employing such strategies as posing questions, identifying/analyzing critical information, and/or hypothesis and conclusion testing. Approach to problem solving suggests competent if also somewhat unsophisticated reasoning skills and logic.	Evaluates quantitative and/or statistical problems only with great difficulty. Approach to problem solving reveals not only serious shortcomings in reasoning skills and logic, but also fundamental problems in developing effective strategies to explore quantitative and/or statistical questions.		
Demonstrates knowledge of mathematical and/or statistical models (1, 2, 3, 5, 6, 7).	Develops and applies correctly mathematical and/or statistical models to interpret real world and abstract phenomena.	Identifies relevant quantitative and/or statistical models for interpreting real world and/or abstract phenomena, but has difficulty both in constructing his/her own models and/or applying them convincingly and convincingly.	Has little to no understanding for how to interpret real world or abstract phenomena using mathematical or statistical models, or for how to construct such models.		
Demonstrates an ability to communicate mathematical and/or statistical knowledge using appropriate notation and vocabulary (1, 2, 3, 6, 7).	Evaluates and explains mathematical and/or statistical knowledge (e.g., concepts, ideas, and conclusions) using appropriate notation (e.g., symbols, charts, graphs) and vocabulary clearly and without major errors.	Describes mathematical and/or statistical knowledge using appropriate notation and vocabulary, but with occasional inaccuracies or problems with clarity.	Displays little ability for competently describing mathematical and/or statistical knowledge using appropriate notation or vocabulary.		
Demonstrates knowledge of the strengths and limitations of employing mathematical and/or statistical methods in addressing human problems (1, 2, 3, 5, 6, 7).	Evaluates and discusses the strengths and limitations of employing mathematical and/or statistical methods in addressing human problems.	Identifies the value in using mathematical and/or statistical approaches to address human problems, but has difficulty evaluating critically the advantages and disadvantages of such approaches.	Has little to no understanding for either the strengths or limitations of mathematical and/or statistical approaches to addressing human problems.		
<b>Total:</b>					

# EVALUATION RUBRIC FOR UTC GENERAL EDUCATION ASSESSMENT

Category: Natural Sciences					
Core Competency	5-4 Exemplary	3-2 Satisfactory	1-0 Unacceptable	NA	Score
Demonstrate disciplinary knowledge in the natural and physical sciences.	Analyzes and evaluates how scientists employ the scientific method to develop theories that explore natural phenomena. Can both describe major theories and apply these concepts to scientific queries.	Describes the basics of the scientific method and the development of scientific theories to explore natural phenomena. Familiar with major scientific concepts and theories, even if not explicitly named.	Displays little to no awareness of specific scientific theories or the process of the scientific method.		
Demonstrate knowledge of the historical context of scientific achievement.	Appropriately evaluates and explains the historical context and societal impact of humankind's achievements in comprehending the natural/physical world and universe.	Identifies relevant historical and scientific milestones for discussing humankind's scientific achievements, but may have difficulty in evaluating the impact and continuity of scientific growth.	Has difficulty identifying relevant milestones and little knowledge of how humankind's achievements have contributed to understanding the natural/physical world and the universe		
Demonstrate knowledge of the role of creativity and logical reasoning in scientific discovery.	Clearly discusses how creativity and logical reasoning have influenced the development of scientific knowledge and understands how they play a role in scientific problem solving. Is aware that scientific discovery is based on new/novel extensions/modifications of currently accepted scientific models.	Has a basic understanding of how creativity and logical reasoning have advanced the development of scientific knowledge and discovery or how they play a part in scientific problem solving.	Has little to no understanding of how creative and/or logical reasoning have influenced the development of scientific knowledge.		
Demonstrate knowledge of the strengths and limitations of empirical approaches to understanding and influencing the natural world.	Analyzes and discusses the strengths and limitations of empirical approaches to understanding and influencing the natural world, using specific examples.	Understands that there are a variety of ways to understand and influence the natural world, each with its own limitations, but is largely incapable of evaluating critically the advantages and disadvantages of alternative approaches.	Has difficulty in understanding the process of empirical evaluation. Is incapable of identifying strengths and limitations of empirical approaches when given specific examples.		
Demonstrate knowledge of the impact of scientific and technological development on human society.	Appropriately evaluates and explains the impact of scientific and technological development on human society	Identifies the impact of scientific and technological developments, but has difficulties assessing their societal impact.	Has, at best, a limited awareness of major scientific and technological advances and their impact on society.		
<b>Total:</b>					

# EVALUATION RUBRIC FOR UTC GENERAL EDUCATION ASSESSMENT

Category: Rhetoric and composition					
Core Competency	5-4 Exemplary	3-2 Satisfactory	1-0 Unacceptable	Weight	Score
Recognize that writing always takes place within specific rhetorical situations. (1,2,3)	Reflects especially thoughtful attention to the given rhetorical situation, taking into consideration such elements as the specific audience, temporal setting, and form of “publication.”	Demonstrates awareness of certain aspects of rhetorical situation, but underestimates or neglects other key dimensions of the rhetorical situation.	Shows little to no consideration of the broader rhetorical situation, whether in the choice of topic, the approach to the argument or message, or in the framing of the discussion.	15	
Compose appropriate texts for a variety of purposes and audiences. (1,2,3,7)	Has an identifiable, focused, and controlled purpose. Demonstrates skill in selecting and employing a rhetorical strategy as well as adjusting the tone and diction to text’s purpose and audience.	Has a sufficiently narrow purpose that is relevant to the specific writing task. Shows an ability to select appropriate rhetorical strategies and adjust tone and diction to meet the text’s purpose and audience, but the execution is not consistently successful.	Fails to convey a specific or appropriately limited purpose. Demonstrates little awareness of the audience or the form’s requirements, as evidenced by the rhetorical appeals, diction or tone.	25	
Organization, reasoning and support.(1,2,3,7)	Organization enhances the purpose. Development of ideas is substantial, relies on a variety of evidence and concrete/metaphorical examples, and is aided by the use of effective transitions. Details provided are germane and convincingly interpreted.	Organization supports the purpose. Sequence of ideas good, but some problems with organization and flow of information evident. Offers support and appropriate details/examples, but some are too general and insufficiently interpreted.	Has an organization or plan inappropriate to its purpose. Offers simplistic, underdeveloped, or cryptic support for ideas. Contains inappropriate or off-topic generalizations, faulty assumptions, and/or errors of fact.	25	
Research and use of sources. (1,2, 3,7)	Uses appropriate sources to support, extend, and inform, but not substitute for the writer’s argumentative stance. Synthesizes material from a variety of well-chosen sources. Doesn’t overuse quotes.	Uses relevant sources to support, extend and inform the argumentative stance, but the variety of sources may be limited and there are problems integrating source material. Quotations and paraphrases may also be overly long.	Has an insufficient range of sources and/or neglects important sources. Overuses quotations and paraphrases, often as a substitute for the writer’s own ideas. Uses sources either without acknowledgment or without indicating their specific purpose.	25	
Use appropriate conventions of presentation for audience, employing standard documentation styles and Standard American English. (1,2, 3,7)	Sentence variety and structure reinforce the purpose; tone is consistent and suitable; diction is precise and appropriate. Contains, at most, only minor errors in mechanics and usage and these do not interfere with meaning. Confidently employs relevant documentation styles.	Sentence structure and tone are generally appropriate for audience and purpose. Diction is suitable, but with some poor choices. Exhibits weaknesses in mechanics and usage, but these do not seriously detract from the meaning. Generally implements relevant documentation standards.	Writing is marred by severe mechanical and usage errors. Basic formatting rules and stylistic conventions largely ignored. Sentence structure, tone, and diction are casual and/or haphazard.	10	
<b>Total:</b>					