

*Virginia Public Higher Education Policy on the Assessment of Student Learning
Template for Reporting Assessment Plans
(February 25, 2011)*

George Mason University

Competency [Year(s) Assessed]	Definition	Standards	Description of Methodology
<p><u>Critical Thinking</u></p> <p>Spring 2006 Spring 2007 Spring 2010</p>	<p>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. The capacity to combine or synthesize existing ideas, images, or expertise in original ways; thinking innovatively; and intellectual risk taking – all components of critical thinking - are part of the development of critical thinking</p> <p>The Critical Thinking learning outcomes and the CT rubric (Appendix 1-A & B) are attached.</p>	<p>There are four levels of competence for each of the nine critical thinking elements identified in our CT rubric:</p> <ul style="list-style-type: none"> • <i>Novice</i> • <i>Milestone: Emerging</i> • <i>Milestone: Showing Strength</i> • <i>Expert/Advanced</i> <p>The expectation is as follows: A majority of students in 300-level courses will score at the <i>emerging</i> level or higher on all elements of the rubric.</p> <p>A majority of students in 400-level courses will score at the <i>showing strength</i> level or higher on all elements of the rubric.</p>	<p>Randomly selected samples of student work are collected from synthesis courses—the culminating general education course taken by all students in their junior or senior year.</p> <p>Faculty members who have participated in a critical thinking faculty learning community review student work using a rubric adapted from the AAC&U VALUE project.</p> <p>Reports on critical thinking assessment are prepared for the General Education Committee and the Board of Visitors which has expressed a particular interest in this competency. The university community receives periodic written reports on all competencies.</p> <p>The General Education Committee is considering moving the current system of assessment for this competency to a course portfolio. In any case, this assessment will be conducted every 6 years.</p>
<p><u>Information Technology</u></p> <p>Every semester since 2002</p> <p>Portfolio assessment in spring 2011</p>	<p>The purpose of the information technology requirement is to ensure that students achieve an essential understanding of information technology infrastructure encompassing systems and devices; learn to make the most of the Web and other network resources; protect their</p>	<p>With the course portfolio method of assessing Information Technology, there are multiple components that are reviewed, including student work. For the latter, reviewers rate how fully the student work sample manifests the intended IT outcomes using the following</p>	<p>Mason’s assessment approach is adapted from a successful course portfolio system developed by the College of William and Mary, and recently used as part of a SACS reaccreditation process. A course portfolio is created by an individual faculty member, providing direct evidence of how the general education learning outcomes are addressed in the course and how well students achieve these outcomes.</p>

Competency [Year(s) Assessed]	Definition	Standards	Description of Methodology
	<p>digital data and devices; take advantage of latest technologies; and become more sophisticated technology users and consumers.</p> <p>IT student learning outcomes and course portfolio review rubric (Appendix 2-A & B) are attached. The general education categories of approved courses for IT include: “IT only” courses--which must address SLOs 1 and 2 and one additional outcome and “IT with ethics component” courses—which must address SLOs 1, 2, 3, and 5. Courses meeting only the “IT Ethics” component must address outcomes 3 and 5.</p>	<p>four-point scale:</p> <ul style="list-style-type: none"> • <i>Completely</i> • <i>Mostly</i> • <i>Somewhat adequately</i> • <i>Inadequately</i> 	<p>An electronic course portfolio has the following components:</p> <ul style="list-style-type: none"> • <i>Course/section syllabus</i> • <i>Faculty reflection</i> • <i>Course assignments/projects</i> • <i>Samples of student work</i> • <i>Review team ratings</i> <p>When a general education category is under review, all faculty (regardless of appointment status, full-time or adjunct) who teach an approved course or a section of the course during fall and spring semesters may be required to submit a course portfolio.</p> <p>Reviewers include members of the General Education Committee and faculty who have general expertise in the field under review. They are trained on a common rubric.</p> <p>A key component of this methodology is the follow up with the individual faculty member, with the chair of the respective department and with the entire General Education Committee. Reports on IT assessment are prepared for the General Education Committee. The university community receives periodic written reports on all competencies.</p> <p>This assessment will be conducted every 6 years.</p>

<u>Competency</u> <u>[Year(s) Assessed]</u>	Definition	Standards	Description of Methodology
<p><u>Oral Communication</u></p> <p>Fall 2005 Spring 2007 Fall 2010</p>	<p>Oral communication competency is the ability to use oral communication as a way of thinking and learning as well as sharing ideas with others.</p> <p>Oral communication learning outcomes and rubrics (Appendix 3-A & B) are attached.</p>	<p>Standards for oral communication competency were established by a faculty committee comprised of faculty who teach general education courses that satisfy the oral communication requirement and other members of the Communication faculty. These are the standards:</p> <ul style="list-style-type: none"> • <i>Highly competent level:</i> a student “meets expectations” on 90% or more of 20 items on the rubric. • <i>Competent level:</i> a student “meets expectations” on 75%-89% of the total items. • <i>Less than competent:</i> a student “meets expectations” on less than 75% of the total items. 	<p>Sections of COMM 100 and COMM 101 are randomly selected for review and student presentations are rated by faculty who teach these basic communication courses, but not their own sections. Two separate, but related rubrics are used depending on the course.</p> <p>Follow up includes written reports to the Communication faculty, and on occasion, oral presentations to the entire faculty. The General Education Committee always receives these reports to inform their decisions about the general education curriculum. The university community receives periodic written reports on all competencies.</p> <p>This assessment will be conducted every 6 years.</p>
<p><u>Quantitative Reasoning</u></p> <p>Spring 2003 Spring 2004 Fall 2007 Spring 2008</p>	<p>The definition of quantitative reasoning competence is embodied in the four learning outcomes for quantitative reasoning. The four outcomes are further defined by separate learning objectives created for each outcome by the departments of Math and Statistics.</p> <p>See the attached Quantitative Reasoning Learning Outcomes and Objectives for MATH 106 and for STAT 250 (Appendix 4).</p>	<p>Standards were established by the faculty as follows:</p> <ul style="list-style-type: none"> • <i>High Proficiency:</i> At least 80% of the questions were answered correctly • <i>Acceptable Proficiency:</i> 60—79% were answered correctly • <i>Low Proficiency:</i> Less than 60% of the questions were answered correctly. 	<p>Among the choices of courses that satisfy general education quantitative reasoning requirements, two—MATH 106 and STAT 250—have particularly large enrollments. Faculty from these departments developed 2-4 equivalent versions of quantitative reasoning tests using the same QR learning outcomes. All sections of these two courses participate in the assessment.</p> <p>Follow up includes written reports to the Math and Stat faculty as well as the General Education Committee. This assessment will likely be included in the course portfolio system of assessment in the future.</p> <p>This assessment will be conducted every 6 years.</p>

<u>Competency</u> <u>[Year(s) Assessed]</u>	Definition	Standards	Description of Methodology
<p><u>Scientific Reasoning</u></p> <p>Spring 2004 Spring 2006 Spring 2007 Fall 2007 and Spring 2008</p>	<p>In general education natural science courses, students study critical approaches of the scientific method, identify the relation of theory and experiment, use quantitative and qualitative information, and understand the development and elaboration of major ideas in science.</p> <p>The definition of scientific reasoning competence parallels the goals of the general education program for natural science, and the eight learning outcomes constitute the definition of SR.</p> <p>See the attached Scientific Reasoning Learning Outcomes (Appendix 5).</p>	<p>The standards for scientific reasoning are under revision, along with the outcomes and the natural science curriculum.</p>	<p>Scientific reasoning tests have been developed, piloted and revised several times by a team of faculty teaching basic science courses. Several concerns surfaced after multiple tries at assessing this competence. The most significant is that what is being assessed is not what is being taught in most basic science courses. The testing approach that has been used in the past will be revised so that scientific reasoning is assessed using the course portfolio method.</p> <p>Science faculty are currently revising general education outcomes and the associated curriculum. A portfolio assessment, as described under Information Technology, will be conducted most likely in 2011-12.</p> <p>This assessment will be conducted every 6 years.</p>
<p><u>Written Communication</u></p> <p>Every year since 2002</p>	<p>Mason’s writing program emphasizes writing as a process that is not simply a way of communicating already formulated thoughts, but a way of discovering, exploring and developing new ideas. Students experience writing as a recursive process of researching, drafting, and revising (see Appendix 6-A for written communication learning outcomes).</p> <p>Written communication assessment is conducted at the discipline-level and in introductory</p>	<p>Most units use a three-tier “satisfactory” scale for each learning outcome, but all use a four-level standard for overall writing competence:</p> <ul style="list-style-type: none"> • <i>Level One: Not Competent College-Level Writing</i> • <i>Level Two: Emerging College-Level Writing Competence</i> • <i>Level Three: Competent College-Level Writing</i> • <i>Level Four: Highly Competent College-Level Writing</i> <p>A rubric defining this four-level</p>	<p>Mason assesses written communication in the general education program in English 100 or 101 (Students must take one.) and again in writing-intensive courses in the discipline. Each discipline unit conducts a writing assessment once every 6/7 years as part of Mason’s Academic Program Review. The English 100/101 assessment was conducted in spring 2008 and has not yet been re-scheduled.</p> <p>In all cases, randomly selected papers are reviewed by two raters (a third if there is disagreement)—faculty in the discipline in the case of the academic units, and English instructors in the case of English 100/101.</p>

Competency [Year(s) Assessed]	Definition	Standards	Description of Methodology
	<p>composition courses. The rubrics used for all include six broad categories:</p> <ol style="list-style-type: none"> 1. <i>Audience/purpose/context</i> 2. <i>Content</i> 3. <i>Organization/structure</i> 4. <i>Sources/evidence/document- tation</i> 5. <i>Mechanics/style</i> 6. <i>Other discipline-specific criteria</i> <p>The attached writing assessment checklist (Appendix 6-B) is compiled from criteria included on discipline-specific and introductory composition rubrics and serves as a definition of written communication.</p>	<p>scale is attached (Appendix 6-C).</p>	<p>Reports are prepared by academic units and submitted to the Writing Assessment Group and to the Office of Institutional Assessment. For English 100/101, written reports are prepared for the English 100/101 Coordinator and the Writing Assessment Group.</p> <p>It is likely that some changes will be made in the approach to writing assessment. The General Education Committee needs to be more centrally involved and programs that are not in Mason's Academic Program Review need a separate schedule for reporting.</p>

Appendix 1A: Critical Thinking Learning Outcomes

Critical thinking is a higher order thinking skill exhibited in context. At the college level, it is learned, developed and finds formal expression within contexts represented by academic disciplines. Nonetheless, because critical thinking is a transferable skill, there are core meanings of critical thinking that transcend disciplines. The following components of critical thinking were identified by an interdisciplinary team of faculty as the essential criteria by which critical thinking should be judged at George Mason:

- Identify important questions/problems/issue.
- Analyze, interpret and make judgments about the relevance and quality of information.
- Assess assumptions and consider alternative perspectives/solutions.
- Draw conclusions and make judgments based on evidence gathered.
- Be engaged with their topic/idea.
- Integrate ideas into a coherent argument/solution/presentation, etc.
- Communicate the results of their thinking.

Revised in fall 2006.

Appendix 1-B: Development Of Critical Thinking Rubric

~ Adapted for George Mason University from the AAC&U Critical Thinking VALUE Rubric

Overview

This rubric was adapted from the AAC&U VALUE rubrics for critical and creative thinking by an interdisciplinary team of faculty participating in a Critical Thinking Across the Curriculum [CTAC] faculty community. The rubric articulates fundamental criteria for the development of critical thinking, with performance descriptors demonstrating progressively more sophisticated levels of attainment. It provides a vision for the kinds of graduates we want to send into the world; that is, where we want students to be when they leave Mason.

The rubric's uses are twofold. First, it is intended as a framework for faculty to use as they reflect on strategies and assignments they implement to develop students as critical thinkers in their classrooms. Faculty might reflect on the opportunities to set students on this developmental trajectory and to show improvement in the development of critical thinking at course, program, or institutional levels. It provides a macro-level view of how students grow, progress, and/or evolve in the development of their critical thinking during their academic careers. Secondly, the rubric is intended for institutional-level use in evaluating and discussing student learning. It may also afford the opportunity to examine the development of critical thinking competencies within and/or across units.

Scholars in this field point to the key importance of dispositions, or habits of mind, in the development of students as critical thinkers. Thus, the rubric begins with the criterion, intellectual autonomy, *as a precondition* for the development of specific critical thinking competencies as articulated in the remainder of the rubric. The target, for those who teach critical thinking, is to talk with students about the dispositions or habits of mind of the critical thinker as the development of the cognitive skills proceeds and to encourage them to be reflective about themselves as critical thinkers.

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. The capacity to combine or synthesize existing ideas, images, or expertise in original ways; thinking innovatively; and intellectual risk taking – all components of creative thinking – is part of the development of critical thinking.

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 matters of personal and professional contexts, specifically, but not exclusively, the vocations, the professions, industry, and commerce.

Assessment of Work Samples

This rubric is designed for use with many different types of assignments and the suggestions here are not an exhaustive list of possibilities. The development of critical thinking can be demonstrated in assignments that require students to complete analyses of text, data, or issues. Research papers, lab reports, musical compositions, a mathematical equation that solves a problem, or a prototype design are all examples of work samples that could be assessed. 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.

DEVELOPMENT OF CRITICAL THINKING RUBRIC

~ Adapted for George Mason University from the AAC&U Critical Thinking VALUE Rubric

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. The capacity to combine or synthesize existing ideas, images, or expertise in original ways; thinking innovatively; and intellectual risk taking – all components of creative thinking – is part of the development of critical thinking.

NOTE: When used as an assessment tool, evaluators will be asked to note any work sample or collection of work that does not meet novice level performance. Not all elements will be applicable to all teaching situations.

	Entry-level Courses	Synthesis Courses		Capstone Courses
	Novice	Milestone: Emerging	Milestone: Showing Strength	Expert/ Advanced
Intellectual autonomy: <i>Developing the Critical Thinker</i>	Typically a dualistic view of the world (black/white, right/wrong) and is dependent on authority. There is reluctance to examine counter-argument. Student has unrealistic view of self as well as unfocused concern with work organization, study skills, and intellectual habits of mind.	Students begin to recognize multiple perspectives and demonstrate courage as they begin to take risks with ideas. There is a developing determination to succeed and perseverance. Developing self-knowledge, e.g., the acceptance one might be wrong, seeking out knowledge, learning skepticism. Early awareness of study skills and organization weaknesses.	There is developing confidence in reasoning and argument where the student approaches knowledge questions analytically. Qualities include fair-mindedness and an opening up to others' view points and arguments. Shows empathy with the situations of others (fellow- students, writers, artists). Developing definition of self as student through self-discipline (e.g., punctual, taking pride in one's work, no procrastination).	Intellectual integrity is evidenced (e.g., search for counter-arguments, search for evidence); student grasps the contextual character of knowledge and that knowledge is constructed. Student demonstrates intellectual humility through realizing the evolving and temporary character of knowledge. There is realistic self-appraisal of one's strengths and limitations.
Explanation of issues	Issue/problem to be considered critically is stated without clarification or description.	Issue/problem to be considered critically is stated but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined, and/or backgrounds unstated.	Issue/problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Issue/problem to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.
Evidence <i>Selecting and using information to investigate a point of view or conclusion</i>	Information is taken from source(s) without any interpretation/ evaluation. Viewpoints of experts are taken as fact, without question.	Information is taken from source(s) with some interpretation/ evaluation, but not enough to develop a coherent analysis or synthesis. Viewpoints of experts are taken as mostly fact, with little exploration.	Information is taken from source(s) with enough interpretation/ evaluation to develop a coherent analysis or synthesis. Viewpoints of experts are explored.	Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis. Viewpoints of experts are explored in depth.
Influence of context and assumptions	Shows an emerging awareness of present assumptions (sometimes labels	Identifies several relevant contexts when presenting a position. May be more aware of	Identifies and examines own and others' assumptions and several relevant contexts when	Systematically and methodically analyzes own and others' assumptions and carefully

	Entry-level Courses	Synthesis Courses		Capstone Courses
	Novice	Milestone: Emerging	Milestone: Showing Strength	Expert/ Advanced
	assertions as assumptions). Begins to identify some contexts when presenting a position.	others' assumptions than one's own (or vice versa).	presenting a position.	evaluates the relevance of contexts when presenting a position.
Student's position (perspective, thesis/ hypothesis)	Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.	Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.	Specific position (perspective, thesis/ hypothesis) takes into account the complexities of an issue. Others' points of view are acknowledged within position (perspective, thesis/ hypothesis).	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).
Conclusions and related outcomes (implications and consequences)	Conclusion is inconsistently tied to some of the information discussed; related outcomes (consequences and implications) are oversimplified.	Conclusion is logically tied to information (because information is chosen to fit the desired conclusion); some related outcomes (consequences and implications) are identified clearly.	Conclusion is logically tied to a range of information, including opposing viewpoints; related outcomes (consequences and implications) are identified clearly.	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.
Taking risks <i>May include personal risk or risk of failure in successfully completing assignment.</i>	Stays strictly within the guidelines of the assignment.	Considers new directions or approaches without going beyond the guidelines of the assignment.	Incorporates new directions or approaches to the assignment in the final product.	Actively seeks out and follows through on untested and potentially risky directions or approaches to the assignment in the final product.
Innovative thinking <i>Novelty or uniqueness (of idea, claim, question, form, etc.)</i>	Reformulates a collection of available ideas.	Experiments with creating a novel or unique idea, question, format, or product.	Creates a novel or unique idea, question, format, or product.	Extends a novel or unique idea, question, format, or product to create new knowledge or knowledge that crosses boundaries.
Connecting, synthesizing, transforming	Recognizes existing connections among ideas or solutions.	Connects ideas or solutions in novel ways.	Synthesizes ideas or solutions into a coherent whole.	Transforms ideas or solutions into entirely new forms.

Appendix 2-A: Information Technology Learning Outcomes

Almost no area of academic, professional, or personal life is untouched by the information technology revolution. Success in college and beyond requires computer and information literacies that are flexible enough to change with a changing IT environment and adaptable to new problems and tasks.

The purpose of the information technology requirement is to ensure that students achieve an essential understanding of information technology infrastructure encompassing systems and devices; learn to make the most of the Web and other network resources; protect their digital data and devices; take advantage of latest technologies; and become more sophisticated technology users and consumers.

Courses meeting the "IT only" requirement must address learning outcomes 1 and 2, and one additional outcome. Courses meeting "IT with Ethics component" must address outcomes 1, 2, 3, and 5. Courses meeting the only IT Ethics component must address outcomes 3 and 5.

1. Students will be able to use technology to locate, access, evaluate, and use information, and appropriately cite resources from digital/electronic media.
2. Students will understand the core IT concepts in a range of current and emerging technologies and learn to apply appropriate technologies to a range of tasks.
3. Students will understand many of the key ethical, legal and social issues related to information technology and how to interpret and comply with ethical principles, laws, regulations, and institutional policies.
4. Students will demonstrate the ability to communicate, create, and collaborate effectively using state-of-the-art information technologies in multiple modalities.
5. Students will understand the essential issues related to information security, how to take precautions and use techniques and tools to defend against computer crimes.

Revised in spring 2010

APPENDIX 2-B
COURSE PORTFOLIO REVIEW WORKSHEET

Course Name: _____

Reviewer's Name: _____

1. Which gen ed learning outcomes does the faculty member **intend** to address in the course/section? Check all that apply. (The sources of evidence include syllabus, faculty reflection and assignments.)
- Outcome 1
 - Outcome 2
 - Outcome 3
 - Outcome 4
 - Outcome 5

2. How well are the **intended** learning outcomes addressed in the course?

	Outstanding	Good	Fair	Poor	Not enough info	NA*
Outcome 1	4	3	2	1	IN	NA
Outcome 2	4	3	2	1	IN	NA
Outcome 3	4	3	2	1	IN	NA
Outcome 4	4	3	2	1	IN	NA
Outcome 5	4	3	2	1	IN	NA

*NA: not applicable or not intended to address in the course.

3. Please evaluate the following based on the **selected assignment** and the related student work for that assignment. You are not asked to re-grade the student work. Please pay attention to the faculty member's syllabus, reflection and description of the assignment.

- a. Intended Outcome(s) addressed in the selected assignment (Check all that apply):

- Outcome 1
- Outcome 2
- Outcome 3
- Outcome 4
- Outcome 5

- b. To what extent does the assignment give students the opportunity to demonstrate their competence in the intended outcome(s)

- Very much quite a bit somewhat very little

- c. How fully do the student work samples manifest the intended outcomes? (Please **ignore** the faculty's grade on the work samples.) **Note: Skip this section if the student work samples are multiple-choice exams. Reviewers should consider the students' test performance (as reported by the instructor on the Portfolio Coversheet) in developing ratings for Question 4.**

Student Name or Work Sample #	Completely	Mostly	Somewhat Adequately	Inadequately	Unable to Judge
#1	4	3	2	1	<input type="checkbox"/>
#2	4	3	2	1	<input type="checkbox"/>
#3	4	3	2	1	<input type="checkbox"/>
#4	4	3	2	1	<input type="checkbox"/>
#5	4	3	2	1	<input type="checkbox"/>
#6	4	3	2	1	<input type="checkbox"/>
#7	4	3	2	1	<input type="checkbox"/>

#8	4	3	2	1	<input type="checkbox"/>
#9	4	3	2	1	<input type="checkbox"/>
#10	4	3	2	1	<input type="checkbox"/>

4. Given the mission of the General Education program, please rate the course in the following categories:

	Outstanding	Good	Fair	Poor	Not enough info
Articulation of the gen ed learning outcomes for students	4	3	2	1	IN
Congruence of the gen ed learning outcomes with the course content and goals	4	3	2	1	IN
Appropriateness of course material for the gen ed curriculum	4	3	2	1	IN
Course structures and procedures that contribute to the likely achievement of the gen ed outcomes by students	4	3	2	1	IN
Appropriateness of the assignments or forms of assessment, in relation to the gen ed learning outcomes	4	3	2	1	IN
Overall Effectiveness of the course in addressing gen ed learning outcomes	4	3	2	1	IN

Optional Questions:

5. What elements/features from the course would you recommend to other faculty members who also teach gen ed courses in the same category?

6. In terms of addressing the intended gen ed learning outcomes, what suggestions would you give to the faculty member?

7. Other comments about the course or the review process

Appendix 3-A: Oral Communication Learning Outcomes

Oral communication competency at George Mason University is defined as the ability to use oral communication as a way of thinking and learning as well as sharing ideas with others. The general education program identifies numerous learning goals in oral communication which are addressed specifically in two Communication courses, COMM 100, Public Speaking, and COMM 101, Interpersonal and Group Interaction. Upon completion of these courses, students will be able to:

1. Analyze audience and adapt an oral presentation to audience
2. Construct and deliver a well-organized, logical, and informative oral presentation that demonstrates analytical skills
3. Use clear, concise, colorful, creative and culturally sensitive language in an oral presentation
4. Use appropriate delivery techniques (e.g. maintain adequate eye contact, being vocally expressive, avoid distracting or nervous mannerisms, etc.) in an oral presentation.
5. Use appropriate presentational technology to enhance messages and convey greater depths of information, knowledge and feeling in an oral presentation

Revised in fall, 2006

Appendix 3-B: Oral Communication Assessment – Rubric One
Speech: Question of Policy

Criteria	Level of Achievement		
	Exceeds Expectations	Meets Expectations	Does not Meet Expectations
Audience Analysis/Topic Choice			
1. Appropriate & relevant to audience	2	1	0
2. Interesting and creative approach to topic	2	1	0
Introduction			
3. Memorable & creative	2	1	0
4. Establishes credibility (ethos)	2	1	0
Content/Organization			
5. Identifies question of policy	2	1	0
6. Key ideas well-organized & explained	2	1	0
7. Arguments/evidence well-developed	2	1	0
8. Uses clear transitions & summaries	2	1	0
9. Cites credible/appropriate source material	2	1	0
Language			
10. Clear, concise, colorful/creative, culturally sensitive (nonsexist/inclusive)	2	1	0
Delivery			
11. Meets time limits (5-6 minutes)	2 within limits	1 ≤ 1 minute under/over	0 ≥ 1 minute under/over
12. Makes appropriate eye contact	2	1	0
13. Vocally expressive, conversational style	2	1	0
14. Avoids nervous mannerisms, other non-fluencies	2	1	0
15. Nonverbally expressive	2	1	0
Presentation Aids			
16. Uses aids to enhance, not distract from or replace presentation	2	1	0
17. Quality of aids	2	1	0
18. Integrates & displays aids at appropriate time	2	1	0
Conclusion			
19. Reviews major ideas; urges thesis	2	1	0
20. Memorable & creative, clearly ends presentation	2	1	0

Maximum: 40 points

Rater: _____ **Date:** _____ **Course/Section** _____ **Speaker#** _____

**Oral Communication Assessment – Rubric Two
Team Teaching Presentation**

Criteria	Level of Achievement		
	Exceed Expectations	Meet Expectations	Does not Meet Expectations
Introduction			
1. Memorable & creative	2	1	0
2. Establishes credibility (ethos)	2	1	0
3. Previews structure	2	1	0
Content/Organization			
4. Clear teaching goal	2	1	0
5. Clarity of concept	2	1	0
6. Key ideas well-organized & explained	2	1	0
7. Uses clear transitions	2	1	0
8. Cites sufficient, credible and appropriate source material (textbook + 4)	2	1	0
9. Effective distribution of content/use of time	2	1	0
Language			
10. Clear, concise, colorful/creative, culturally sensitive (nonsexist/inclusive)	2	1	0
Delivery			
11. Meets time constraints (20-30 minutes)	2 within limits	1 ≤ 1 minute under/over	0 ≥ 1 minute under/over
12. Makes appropriate eye contact	2	1	0
13. Vocally expressive, conversational style	2	1	0
14. Avoids nervous mannerisms, other non-fluencies	2	1	0
15. Nonverbally expressive	2	1	0
16. Achieves audience engagement	2	1	0
17. Effective team interaction	2	1	0
Handouts/Visual Aids			
18. Uses handout and/or visual aid to enhance, not distract from, nor replace presentation points	2	1	0
Conclusion			
19. Reviews major points	2	1	0
20. Memorable & creative (creates an impact)	2	1	0

Maximum: 40 points

Rater: _____ **Date:** _____ **Course/Section** _____
Group#: _____ **Number of Speakers:** _____

Appendix 4: Quantitative Reasoning Learning Outcomes

The definition of quantitative reasoning competence parallels the goals of the General Education program for quantitative reasoning at Mason. There are four learning goals for Mason graduates:

1. Students are able to interpret quantitative information (i.e., formulas, graphs, tables, models, and schematics) and draw inferences from them.
2. Given a quantitative problem, students are able to formulate the problem quantitatively and use appropriate arithmetical, algebraic, and/or statistical methods to solve the problem.
3. Students are able to evaluate logical arguments using quantitative reasoning.
4. Students are able to communicate and present quantitative results effectively.

Under each learning goal, faculty teaching Math 106 and Statistics 250 further define course-specific learning objectives which align with the subject matter and the quantitative reasoning skills emphasized in these courses.

Revised in summer 2007

Learning Outcomes and Objectives for Math 106

- 1. Students are able to interpret quantitative information (i.e., formulas, graphs, tables, models, and schematics) and draw inferences from them.*
 - a. Students are able to identify, classify and count objects as members of sets, and calculate and quantify unions, intersections and complements of sets.
 - b. Students are able to use percentiles in word problems relating to normally distributed populations and draw accurate conclusions, when a z-score/percentile conversion table is provided.
- 2. Given a quantitative problem, students are able to formulate the problem quantitatively and use appropriate arithmetical, algebraic, and/or statistical methods to solve the problem.*
 - a. Students are able to calculate percentage of increase/decrease in one-step and multiple-step word problems.
 - b. Students are able to calculate/identify measures of central tendency (mean, median, and mode).
 - c. Students are able to compute probabilities in simple experiments.
- 3. Students are able to evaluate logical arguments using quantitative reasoning.*
 - a. Students are able to differentiate between conjunction and disjunction to determine the truth value of a statement.
 - b. Students are able to evaluate and discriminate between various logical quantifiers.
- 4. Students are able to communicate and present quantitative results effectively.*
 - a. Students are able to assess the meaning of and draw inferences from quantitative statements.

Learning Outcomes and Objectives for STAT 250

1. *Students are able to interpret quantitative information (i.e., formulas, graphs, tables, models, and schematics) and draw inferences from them.*
 - a. Students are able to identify and interpret the meaning of the parts of a box plot.
 - b. Students are able to manually determine the mean, median and standard deviation of a small data set.
 - c. Students are able to select the appropriate probability from a standard normal table using quantitative information in a problem statement.
 - d. Students are able to select the appropriate probability from a binomial table using quantitative information in a problem statement.
2. *Given a quantitative problem, students are able to formulate the problem quantitatively and use appropriate arithmetical, algebraic, and/or statistical methods to solve the problem.*
 - a. Students are able to determine an $xx\%$ confidence interval for the mean of a population using sample statistics contained in a problem description.
 - b. Students are able to determine a $yy\%$ confidence interval for the proportion of a population using sample statistics contained in a problem description.
 - c. Students are able to express the null and alternative hypotheses for decision problems concerning a population mean.
3. *Students are able to evaluate logical arguments using quantitative reasoning.*
 - a. Students are able to determine the correct conclusion from the results of a hypothesis test of the population proportion using the classical method.
 - b. Students are able to determine the correct conclusion from the results of a hypothesis of the difference of population means using the p-value method.
4. *Students are able to communicate and present quantitative results effectively.*
 - a. Students are able to select the expression that correctly interprets the confidence interval for a population proportion.

Appendix 5: Quantitative Reasoning Learning Outcomes

In general education natural science courses, students study critical approaches of the scientific method, identify the relation of theory and experiment, use quantitative and qualitative information, and understand the development and elaboration of major ideas in science. Scientific reasoning competence is one of the most important outcomes for natural science courses across disciplines. The following are the key components/learning goals of scientific reasoning and it should be recognized that each discipline emphasizes these goals to varying degrees:

1. Students will demonstrate that they understand the ways of scientific knowing, including inductive and deductive, empirical and theoretical.
2. Students will demonstrate the ability to develop and test a hypothesis.
3. Students will demonstrate the ability to read and interpret data.
4. Students will demonstrate the ability to interpret both primary and secondary sources.
5. Students will demonstrate their knowledge of both quantitative and qualitative methods.
6. Students will demonstrate an awareness of both the power of the scientific process and its limitations.
7. Students will demonstrate an awareness of communication as an integral part of the scientific way of knowing, both between and among scientists, and between scientists and the rest of society.
8. Students will demonstrate the ability to understand and value the role of science in both personal and public/societal decision-making.

Revised in spring 2008

Appendix 6-A: Written Communication Learning Outcomes

Written communication is one of the foundation requirements of Mason's general education curriculum. Mason's nationally recognized writing program emphasizes writing as a process: it is not simply a way of communicating already formulated thoughts, but a way of discovering, exploring and developing new ideas. On their way to completing a paper, students go through the recursive processes of researching, drafting, and revising; at all stages they engage in critical thinking.

Students who successfully complete one or more writing-intensive courses in their major will be able to:

1. Analyze and synthesize course content using methods appropriate to the major;
2. make reasoned, well-organized arguments with introductions, thesis statements, supporting evidence, and conclusions appropriate to the major.
3. Use credible evidence, to include, as applicable, data from credible primary and/or secondary sources, integrated and documented accurately according to styles preferred in the major.
4. Employ rhetorical strategies suited to the purpose(s) and audience(s) for the writing, to include appropriate vocabulary, voice, tone, and level of formality.
5. Produce writing that employs the organizational techniques, formats, and genres (print and/or digital) typical in the major and/or workplace.
6. Produce writing that demonstrates proficiency in standard edited American English, including correct grammar/syntax, sentence structure, word choice, and punctuation.

Revised in Feb, 2008

Appendix 6-B: Mason Writing Assessment Checklist

Compiled from Criteria Included on Discipline-Specific Rubrics Developed between 2001 and 2007

Writing Assessment Criteria and Elements	Level of Competence		
Audience/Purpose/Context <ul style="list-style-type: none"> <input type="checkbox"/> Demonstrates understanding of how knowledge is constructed in discipline/context <input type="checkbox"/> Uses appropriate strategies for intended audience/purpose <input type="checkbox"/> Demonstrates awareness of conventions for context/genre <input type="checkbox"/> Uses appropriate vocabulary/voice/register (level of formality) <input type="checkbox"/> Follows ethical standards <input type="checkbox"/> Other: 	More than satisfactory	Satisfactory	Less than satisfactory
Content <ul style="list-style-type: none"> <input type="checkbox"/> Meets requirements of the assignment <input type="checkbox"/> Demonstrates understanding of the topic/discipline <input type="checkbox"/> Uses correct methods to analyze data/information/arguments <input type="checkbox"/> Uses appropriate examples/evidence/data to support arguments <input type="checkbox"/> Synthesizes information/data from multiple sources <input type="checkbox"/> Includes diverse/global perspectives <input type="checkbox"/> Other: 	More than satisfactory	Satisfactory	Less than satisfactory
Organization/Structure <ul style="list-style-type: none"> <input type="checkbox"/> Includes an introduction and appropriate conclusion <input type="checkbox"/> Has a thesis statement and/or clear topic sentences <input type="checkbox"/> Has appropriate transitions between ideas/arguments <input type="checkbox"/> Demonstrates a logical “flow” of ideas/arguments <input type="checkbox"/> Uses appropriate headings and sub-headings <input type="checkbox"/> Other: 	More than satisfactory	Satisfactory	Less than satisfactory
Sources/Evidence/Documentation <ul style="list-style-type: none"> <input type="checkbox"/> Uses sufficient amount and quality of source material <input type="checkbox"/> Uses sources appropriate to assignment/discipline (credible, relevant, current, etc.) <input type="checkbox"/> Accurately cites and documents sources according to discipline-specific standards (e.g., APA style) <input type="checkbox"/> Appropriately integrates/quotes/paraphrases/summarizes information from sources <input type="checkbox"/> Other: 	More than satisfactory	Satisfactory	Less than satisfactory
Mechanics/Style (Sentence Level) <ul style="list-style-type: none"> <input type="checkbox"/> Uses correct grammar/syntax/punctuation <input type="checkbox"/> Uses correct and appropriate sentence structure <input type="checkbox"/> Uses appropriate style/tone/word choice <input type="checkbox"/> Shows evidence of proof-reading <input type="checkbox"/> Other: 	More than satisfactory	Satisfactory	Less than satisfactory
Other Discipline-Specific Criteria <ul style="list-style-type: none"> <input type="checkbox"/> Demonstrates strong critical thinking/reasoning abilities <input type="checkbox"/> Demonstrates engagement in the topic/ideas <input type="checkbox"/> Demonstrates original thinking/analysis <input type="checkbox"/> Demonstrates appropriate creativity/personal voice <input type="checkbox"/> Uses appropriate examples/illustrations/charts/hyperlinks to illustrate complex ideas <input type="checkbox"/> Other: 	More than satisfactory	Satisfactory	Less than satisfactory

Appendix 6-C: A Definition of Overall Competence in Written Communication

Overall Writing Competence (Check One)

- Level One: Not Competent College-Level Writing
- Level Two: Emerging College-Level Writing Competence
- Level Three: Competent College-Level Writing
- Level Four: Highly Competent College-Level Writing

Overall competence in college-level written communication in print and digital environments includes an understanding of audience, purpose, genre, content, and thinking processes appropriate to the level of course, as demonstrated through the appropriate use of rhetorical and (inter)disciplinary/workplace conventions, to include:

- format, tone, and vocabulary;
- organization of argument/information;
- evidence from experience, observation, and/or primary and secondary sources; and
- standard edited American English.

Overall Rating	Definition
Highly Competent	The writer demonstrates a strong and clear understanding of audience, purpose, genre, discipline- or course-content, and the thinking processes appropriate to an intermediate or advanced college course, as evidenced by the use of appropriate format, tone, and vocabulary; clear organization and thorough development of argument/information; credible evidence integrated and documented accurately; and standard edited American English. The writing makes a substantive, original argument or other contribution to the field; it demonstrates strong sentence-level fluency and/or has a clear authorial voice.
Competent	The writer demonstrates a competent understanding of audience, purpose, genre, content, and the thinking processes appropriate to intermediate college-level coursework, as evidenced by the use of appropriate format, tone, and vocabulary; clear organization and development of argument/information; and credible evidence integrated and documented accurately. While all of these rhetorical elements are present, some may be less developed or uneven. Though an argument may be clearly stated, it may lack originality and/or depth. The writing may contain some errors in standard edited American English but readability is not compromised.
Emerging	The writer demonstrates an emerging understanding of audience, purpose, and content, and the thinking processes appropriate for an introductory level of college writing competence, as evidenced by the use of appropriate format, tone, and vocabulary; organization of argument/information; and integration and documentation of supporting evidence. While these rhetorical elements have been attempted, some may be less-than-satisfactorily accomplished. The writing may contain some errors in standard edited American English that do not consistently compromise readability.
Not Competent	The writer demonstrates little understanding of audience, purpose, format, and/or the thinking processes appropriate to college-level writing. A majority of these rhetorical elements are weak or absent, as evidenced by an unclear sense of audience and/or purpose; confusing organization and/or format; weak, inappropriate, and/or undocumented evidence. Writing that displays frequent errors in standard edited American English that consistently compromise readability may be rated at this level particularly if other key rhetorical features are weak or absent.