*Virginia Public Higher Education Policy on the Assessment of Student Learning*
*Template for Reporting Assessment Plans*

**UNIVERSITY OF MARY WASHINGTON**

| Competency [Year(s) Assessed] | Definition | Standards | Description of Methodology |
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| Scientific Reasoning **[Fall 2011, Spring 2012]** | The Natural Science requirement of the General Education Curriculum for Bachelor of Arts and Bachelor of Science students will be used in satisfying the scientific reasoning requirement.<br>The University of Mary Washington general education program defined the Natural Science component this way:<br><br>"University of Mary Washington graduates will be confronted with an accelerating array of complex scientific and technical issues and their associated social, political, ethical, and philosophical dilemmas. To understand and make informed judgments about some of the most divisive issues of our time, such as stem cell research, climate change, energy policy, natural resource management, and human reproductive technology, students must possess the capacity to understand, interpret, evaluate and employ scientific information. Liberal learning necessarily involves: the study of science, its history, and its methods; the practical experience gained through applying scientific tools, evidence, and data to specific, real-world, problems; and, the ability to understand larger connections between the natural sciences and everyday life and experience."<br><br>Objectives that the courses fulfilling the Natural Science requirement are expected to meet are:<br><br>• provide a base of knowledge in a particular natural science discipline that is sufficient to allow meaningful intellectual engagement within that | • Students will be able to describe the scientific modes of inquiry that lead to scientific knowledge and to distinguish science from pseudo-science.<br>• Students will be able to formulate hypotheses, identify relevant variables, and design experiments to test hypotheses.<br>• Students will be able to understand the interdependence between developments in science and the larger world.<br>• Students will be able to use theories and models as unifying principles that help us understand the natural world and make predictions.<br>• Students will be able to evaluate the credibility, use, and misuse of scientific and mathematical information in scientific developments and public policy issues. | Assessment will be through course-embedded assessment techniques. Students will be drawn from the entry cohort of fall 2011. A report will be generated through the student information system to determine which of the first-time, full-time students in fall 2011 are enrolled in fall semester courses that meet the first half/sequence of the Natural Science requirement. All faculty members who teach courses that meet those requirements will identify specific learning goals that are clear and central to the overall objective of the scientific reasoning (SR) requirements. Based on the learning goals, instructors of individual courses will develop and embed fifteen multiple choice questions for the final exam which address the desired outcomes in the course. Also, a common rubric that is agreed upon by all instructors teaching courses meeting the natural science requirement will be developed to grade specific assignments/student projects that provide feedback about desired outcomes of the courses. Using a combination of stratified and random sampling methods, the results of 20% of the students registered in those courses will be used for the purpose of the assessment.<br><br>The process described above will be repeated and applied in the Spring 2012 semester to Fall 2011 cohort students enrolled in the 2012 Spring courses that meet the second half/sequence of the Natural Science requirement. Based on the learning goals of those courses, fifteen multiple choice questions that address the desired outcomes in the courses will be embedded in the final exams. Also, the same rubric that was agreed upon by all instructors that taught the first sequence of the courses meeting the natural science requirement will be used to grade specific assignments/student projects that provide feedback about desired outcomes of the courses in the second course sequences.<br><br>Because there will be attrition from the first half since some students enrolled in the fall semester course may not |

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| | discipline;<br>• inculcate the scientific mode of inquiry and relate it to the historical development of knowledge in the natural sciences;<br>• foster opportunities for students to reflect upon the myriad ways in which the natural sciences impact their everyday experiences and choices as citizens;<br>• raise awareness about the social, political, philosophical, and ethical dilemmas that scientific progress often creates; and<br>• provide students with life-long scientific tools that will allow them to better interpret and evaluate scientific information. | | immediately follow it up by taking the second course in the subsequent spring, the number of students completing the courses in spring 2012 will be smaller than that those who took the courses in fall 2011. An effort will be made to keep the numbers close.<br><br>Trends in the assessment results of the first and second sequences of the courses will be examined for patterns, strengths and weaknesses. Students' performance will be classified into one of the three categories: highly competent, competent, and minimally competent. The SR assessment ad-hoc group consisting of faculty in programs teaching SR courses will define the three categories. Additionally, the general performances of the students in the first and second sequences of the course will be compared to determine the extent and direction to which scores differ.<br><br>Results of the SR assessment will be made widely available. Academic departments offering Natural Science courses will be provided with a full set of first/second sequence comparison data in order to give them information they can use to make appropriate curricular changes, if needed. In addition, presentations of the findings will be made to the General Education Committee, the entity that is responsible for monitoring UMW's General Education curriculum and the body charged with making recommendations for changes in that curriculum. Finally, a summary report will be posted on the University's website. |

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| Quantitative Reasoning **[Fall 2011, Spring 2012]** | The Quantitative Reasoning component of the general education requirements at UMW prepares students to make informed judgments about quantitative information. Courses which satisfy this requirement rely on the study of statistics, logic, and/or mathematics to teach students how to work with evidence, understand probabilities, solve complex problems, and draw inferences while avoiding the fallacies and pitfalls which frequently surround the use of quantitative information." As stated in the UMW's General Education curriculum, the objectives that the Quantitative Reasoning requirements are expected to fulfill are as follows:<br>• emphasize the interpretation of quantitative information;<br>• cultivate the ability to solve problems and construct abstract arguments using mathematical techniques;<br>• develop skills to solve problems that have an explicit dependency on quantitative information;<br>• explore the role of mathematical techniques and quantitative information in the context of other disciplines; and<br>• provide a deeper appreciation for how quantitative information is used to make decisions that affect our lives. | • Students will demonstrate an ability to interpret quantitative information.<br>• Students will demonstrate an ability to solve real-world problems using quantitative, logical, or computational approaches that are typical of quantitative reasoning.<br>• Students will be able to apply mathematical techniques and quantitative reasoning in the context of other disciplines.<br>• Students will gain an appreciation for how quantitative information is used to make decisions. | Assessment will be through course-embedded assessment technique. Participants will be drawn from both the entry cohorts of fall 2008 and spring 2009 [junior/senior class], and the Fall 2011 and Spring 2012 cohorts [freshman class]. At the time of assessment, students from the Fall 2008 and Spring 2009 cohorts should be juniors or seniors and would have been exposed to both lower and upper level classes in quantitative reasoning while students from the Fall 2011 and Spring 2012 cohorts are in their freshman year. A report will be generated through the student information system to determine students in these cohorts enrolled in Quantitative Reasoning designated courses in the Fall 2011 and Spring 2012 semesters. All faculty members who teach courses that meet these requirements will identify specific learning goals that are clear and central to the overall objective of quantitative reasoning requirements. Based on the learning goals, instructors of individual courses will develop and embed fifteen multiple choice questions for the final exam which address the desired outcomes in the course. Also, a common rubric that is agreed upon by all instructors teaching courses meeting the quantitative reasoning requirements will be developed to grade specific assignments/student projects that provide feedback about desired outcomes of the courses.<br><br>Trends in the results of the assessment will be examined for patterns, strengths, and weaknesses. Each paper/project assessed using the rubrics will be scored independently by at least two faculty evaluators and then by a third if agreement on a score is not achieved by the first two raters. Based on the results, students will be classified into one of these categories to be defined by the QR assessment ad-hoc committee: highly competent, competent, and minimally competent. The performances of the senior/junior class will be compared to those from the freshman class. The freshman class results will serve as baseline for examining the performance of the junior/senior class in quantitative reasoning. Results of the quantitative reasoning assessment will be made widely |

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| | | | available. Academic departments offering qualitative reasoning related courses will be provided with a full set of freshmen and junior/senior comparison data in order to give them information they can use to make appropriate curricular changes, if needed. In addition, presentations of the findings will be made to the General Education Committee, the entity that is responsible for monitoring UMW's General Education curriculum and the body charged with making recommendations for changes in that curriculum. Finally, a summary report will be posted on the University website. |

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| Written Communications **[Assessed Fall 2007, 2009-10]**<br><br>Next round of assessment **[Spring 2016]** | The Writing Intensive Program (WI) at University of Mary Washington is comparable to the written communication requirement and would be used to fulfill the written communication assessment requirement. Staffed by faculty from virtually every department on campus, the WI program makes it mandatory for every student to pass at least four WI courses in order to graduate. Students may fulfill this requirement by choosing from a wide range of courses designated WI by the various departments on campus. The program is based on the following premises:<br><br>• that writing is a tool that enhances learning in most courses across the disciplines and is an essential form of expression in most academic fields;<br>• that good writing is valued in most careers;<br>• that instructors across the disciplines share the responsibility of helping students become good writers; and<br>• that by writing frequently and receiving guidance, students are likely to improve their writing.<br><br>The goals of the program are (a) to enhance students' understanding of course material by having them write frequently about that material and (b) to help students become better writers. Though preferred writing styles, formats, and tasks vary from one discipline or field to another, the university WI program focuses attention on the following writing features: ideas, organization, appropriate writer's voice, and conventions of correctness and presentation. In Fall 2008, a new General Education Curriculum that included an update in the WI requirement was approved and implemented. | For this assessment, writing competency were defined in the following manner:<br>• Not Competent - The writing does not meet even a minimal level of competency. The flaws are so numerous and/or significant that they undermine effective communication.<br>• Competent - The writing exhibits at least minimal proficiency in the category, as defined in the grid below. Though the writing may exhibit flaws in the category, the flaws are not so numerous or so significant that they prevent effective communication.<br>• Strong - The writing more than adequately meets the definition of competency for the category; it exhibits strength in the category.<br>Each piece of written work was evaluated, and scored, according to the following criteria: If the paper has been rated as "Not Competent" in even one of the seven evaluation categories, the paper's overall rating is "Not Competent." If the paper has | This assessment was based entirely on course-embedded work done by University of Mary Washington students. In fall 2007, for all entering first-time freshmen who enrolled in the beginning writing course, *Writing Workshop* (approximately 400 students), a copy of the first writing assignment each student completed for the course was collected. To ensure anonymity, each student's name was removed from the paper and replaced by a coded surrogate identifier. Those writing samples were evaluated by full-time members of the teaching faculty at the University of Mary Washington who were thoroughly trained to evaluate student papers according to the definitions and criteria agreed upon by the assessors. Each paper was scored independently by at least two faculty evaluators and then by a third when agreement on a score was not achieved by the first two raters. The seven categories used in the evaluation were purpose, development, thought, organization/focus, clarity, grammar/punctuation/mechanics, and research/documentation (if applicable). Using the definitions and evaluation criteria provided, scores were compared on an overall, aggregated basis for the cohort in order to determine if writing competency had changed between the freshman and junior years. Consequently, the data reflecting the direction, magnitude, and characteristics of such changes were used in the analysis of this assessment.<br><br>Approximately 300 of the students who entered in fall 2007 achieved junior status during the 2009-10 academic year. In that year, a writing sample from a writing intensive course taken by members of this student cohort was obtained. Again, each student's name was replaced by a coded identifier. The 2009-10 writing samples were evaluated using the same definitions and criteria employed earlier. Thus, there were two scored writing samples for each student who entered in Fall 2007 and who was still enrolled at the University in 2009-10.<br><br>The results obtained were reviewed carefully by the Writing Intensive Committee in order to determine in which writing |

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| | | been rated as “Competent” or “Strong” in each of the categories, then a distinction will be made between an overall rating of “Competent” or “Strong” by totaling the checkmarks for each scored paper. If the paper has received four or more “Strong” checks, including one for the category of “Thought,” then the overall rating is “Strong.” Otherwise, the overall rating is “Competent.” | areas (numbered 1 – 7 on the grid) the students scored and their progress from the time they entered Mary Washington until the second writing sample was taken. The findings of this analysis led to recommendations that were and will continue to be used to modify and improve the writing program.<br><br>The process described above will also be used for the next round of written assessment scheduled for spring 2016. |

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| Oral Communication [**Fall 2011, Spring 2012]** | Competency in oral communication entails a set of skills that are adaptable to a host of different speaking contexts. A competent speaker will:<br>• speak clearly and expressively using appropriate articulation, pronunciation, volume, rate, and intonation.<br>• demonstrate careful word choice appropriate to the designated audience and are aware of language indicating bias regarding gender, age, ethnicity, or sexual/affectional orientation.<br>• assess the communication context and adapt the message to the audience.<br>• present their ideas in an organizational pattern that allows others to understand.<br>• distinguish between different purposes and goals in communication (persuading, informing, and relating).<br>• structure a prepared message in a public speaking setting that includes an introduction, main points, useful transition(s), and a conclusion.<br>• provide adequate support material and develop the content of their message to enlighten their audience.<br>• receive, construct meaning from, and respond to spoken and/or nonverbal messages.<br>• listen with literal comprehension, demonstrate the ability to recognize main ideas, identify supporting details, recognize explicit relationships among ideas, and recall basic ideas and details.<br>• listen with critical comprehension, exhibit the ability to attend with an open mind, synthesize and evaluate messages, and employ active listening techniques when appropriate.<br><br>(*Adapted from "Speaking and Listening Competencies for College Students," published by the National Communication Association, 1998.)* | • Students will engage course content effectively through the use of well-designed oral communication activities.<br>• Students will understand and be able to identify basic theories and principles of oral communication.<br>• Students will apply theories and strategies for crafting messages (verbal, nonverbal, and visual) for particular audiences and purposes.<br>• Students will critically evaluate mediated and face-to-face communication.<br>• Students will communicate effective oral messages in a variety of settings, including public speaking, group discussion, and interpersonal communication. | In the University's first assessment of our students' oral communication skills in 2005, the only form of communication assessed was a student's ability to deliver a public presentation. For the next round of assessment, we will assess both the ability to communicate effectively in a variety of settings (public presentation, class discussion, and listening) as well as a student's attitudes about their oral communication skills (as recorded in their completion of the Personal Report of Communication Apprehension).<br><br>Competency will be measured by evaluating four areas: public speaking, class discussion, listening, and communication apprehension<br><br>1) Public speaking – class presentations will be recorded in FSEM (First Year Seminars) and SI (Speaking Intensive) designated courses from across the University. Recorded speeches will be evaluated by faculty utilizing a standardized evaluation form. Assessment ratings of speeches given in the FSEM and in a student's first SI course will be considered part of a pre-test; assessment ratings of speeches given in a student's second (or greater) SI course will be considered part of the post-test.<br>2) Class discussion – class discussions in selected FSEM and SI courses will be recorded. At least two different class sessions will be recorded from each selected class. The recordings will be evaluated by communication faculty. Procedures and practices will be reviewed after spring 2011, and appropriate adjustments will be made.<br>3) Listening – students will view a selected campus lecture, after which they will complete a questionnaire that will measure how well they were able to actively listen to and critically engage the lecture material. Students attending the lecture will be given the same questionnaire as students who view the recording. The results will be compared, after which a decision will be made regarding the use of recordings for future listening assessments. |

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| | At the University of Mary Washington, we define competent speaking for a college graduate as the ability to communicate effectively in a variety of different settings, including class discussion, small group, and public speaking settings. It is expected that the student will be able to demonstrate that they can perform in a way that is at least minimally competent, or acceptable, in each of the categories above for the different communication settings in which they will be. The speech act may not be perfect and may not address each area of concern in an equal way. | | 4) Communication apprehension – students will complete the PRCA-24 (Personal Record of Communication Apprehension) in selected SI and FSEM classes. Pre- and post- test groups will be collected using the same methodology as listed in item #1 above. Reports of communication apprehension will be used on a macro-level for discussions about student comfort levels. Reports will also be used on a micro-level to provide support services and resources to those students identified with high levels of apprehension. |

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| Critical Thinking **[Fall 2011, Spring 2012]** | Competency in critical thinking entails a set of skills that are adaptable to a host of differing contexts. At University of Mary Washington, it is expected that students will be able to demonstrate they can perform in a way that is at least minimally competent, or acceptable, in each of the categories below for the different settings they will be. A student's competency in critical thinking is evidenced by their ability to:<br>• demonstrate careful word choice appropriate to the designated audience.<br>• assess the communication context and adapt the message to the audience.<br>• present their ideas in an organizational pattern that allows others to understand.<br>• structure a prepared message in a public speaking setting with an introduction, main points, useful transitions, and a conclusion.<br>• provide adequate support material and develop the content of their message to enlighten their audience.<br>• listen with literal comprehension, demonstrate the ability to recognize main ideas, identify supporting details, recognize explicit relationships among ideas, and recall basic ideas and details.<br>• listen with critical comprehension, exhibit the ability to attend with an open mind, synthesize and evaluate messages, and employ active listening techniques when appropriate. | Students will<br>• critically evaluate mediated and face-to-face communication<br>• interpret information effectively relative to the problem<br>• establish relevant criteria and standards for acceptable solutions<br>• clarify assumptions and predict implications and consequences | In the University's first assessment of our students' critical thinking skills in 2005, critical thinking proficiency was evaluated by measuring students' abilities across five criteria (accuracy, perspective, logic, fairness, and strategy) as expressed in a speech delivered in Speaking Intensive classes. For the next round of assessment, we will assess students' critical thinking skills by evaluating their class presentations, class discussions, and listening aptitudes. The assessment of students' critical thinking skills, as evidenced through class presentation, class discussion, and listening aptitude, will be done in conjunction with the University's assessment of oral communication competencies.<br>1) Public speaking - class presentations will be recorded in FSEM (First Year Seminars) and SI (Speaking Intensive) designated courses from across the University. Recorded speeches will be evaluated by faculty utilizing a standardized evaluation form. Assessment ratings of speeches given in the FSEM and in a student's first SI course will be considered part of a pre-test; assessment ratings of speeches given in a student's second (or greater) SI course will be considered part of the post-test.<br>2) Class discussion – class discussions in selected FSEM and SI courses will be recorded. At least two different class sessions will be recorded from each selected class. The recordings will be evaluated by communication faculty. Procedures and practices will be reviewed after spring 2011, and appropriate adjustments will be made.<br>3) Listening – students will view a selected campus lecture, after which they will complete a questionnaire that will measure how well they were able to actively listen to and critically engage the lecture material. Students attending the lecture will be given the same questionnaire as students who view the recording. The results will be compared, after which a decision will be made regarding the use of recordings for future listening assessments. |

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| ** Information Technology Literacy **[Fall 2014]** | According to the American Library Association (2002), an information literate individual is able to:<br><br>• determine the extent of information needed<br>• access the needed information effectively and efficiently<br>• evaluate information and its sources critically<br>• incorporate selected information into one's knowledge base<br>• use information effectively to accomplish a specific purpose<br>• understand the economic, legal, and social issues surrounding the use of information, and<br>• access and use information ethically and legally<br><br>By demonstrating these qualities, University of Mary Washington graduates will be more self-directed and assume greater control over their own learning. | • Students will be able to determine the nature and extent of information needed.<br>• Students will be able to acquire needed information effectively and efficiently<br>• Students will understand the economic, ethical, legal, and social issues surrounding the use of information and its technologies<br>• Students will be able to critically evaluate the procured information and its sources, and as a result, decide whether or not to modify the initial query and/or seek additional sources | The methodology for assessing Information Technology literacy is still being developed. |

** This is a new area the University of Mary Washington plans to assess. An academic committee has been established to construct the plan for undertaking this assessment and the recommendations from that committee will be advanced to the provost's office later this spring.