

The College of William & Mary

Competency: Information Technology Literacy Assessed in: 2011-2012

Definition

The Digital Information Literacy (DIL) proficiency has been designed by members of the William & Mary faculty to ensure that all students have a basic understanding of digital information, how it is processed, and how to use it judiciously. This requirement emphasizes critical thinking skills in the context of finding, evaluating, and using digital information to pursue course work and independent research at the university level. The DIL proficiency consists of mastering the information in the following modules. The modules are described briefly here and more fully on the associated DIL web pages.

- [Introduction to Digital Information](#) : The advent of computers and associated equipment and software has revolutionized the way in which we interact with information.
- [An introduction to Searching on the internet](#) : This module helps students determine the most appropriate ways to use digital sources to find the information they need for their academic projects. Topics include understanding the distinction between scholarly and popular literature, selecting appropriate databases, identifying concepts and generating search terms.
- [An introduction to issues of Evaluating information you find electronically](#) : There is a great deal of wonderful information available on the World Wide Web, but there is also quite a bit of garbage. This module is designed to help students evaluate web information based on characteristics such as currency, coverage, authority, objectivity and accuracy.
- [An introduction to the Ethics of information use](#) : This module will help ensure that students understand some of the ethical issues that arise as they use technology and digital information in their academic work. Topics include citing sources, avoiding plagiarism, copyright and fair use.
- [An introduction to Digital Communication](#) : This module is designed to introduce students to a broad spectrum of digital communication methods and to help them select the most efficient method for a variety of tasks they may face in their academic work.
- [An introduction to Security and Privacy](#) : This module is designed to introduce students to the types of attacks that may compromise their security and privacy, focusing on the two network services which are most useful and most dangerous: electronic mail and the World Wide Web.

Standards

To assess students' understanding of and competence in Digital Information Literacy, students must take and pass with a grade of C- or better the DIL exam. The exam consists of questions dealing with how computers process digital information; communicating using computers; security and privacy issues; analyzing research needs; finding information electronically; evaluating the information found; and information ethics.

Description of Methodology

All incoming freshmen, as well as newly admitted transfer students with fewer than 39 credit hours earned since graduation from high school, must take and pass with a grade of C- or better the DIL exam. After reviewing the DIL modules, students must complete the Digital Information Literacy proficiency test. Students can read the modules and complete the test from any computer on the Internet, whether at home or on the William & Mary network, including in their residence hall or in one of the public access labs. They may take the test at any time by going to the evaluation page and logging in using their William & Mary userid and password. They can take as much time as they need on the test. If they do not achieve a passing score of 70% or higher, they will have multiple opportunities to take the test after reviewing the information in the modules again. Those students failing to take and/or pass the exam by the posted deadline must enroll in and pass with a C- or better INTR 160, Digital Information Literacy.

Competency: Critical thinking Assessed in: 2012-2013

Definition

The William & Mary faculty intentionally avoid a narrow definition of critical thinking and challenge students to develop a broad range of associated skills. Some of those skills are articulated by faculty in three general objectives for thinking critically:

- To demonstrate an ability to reason deductively
- To demonstrate an ability to reason inductively
- To demonstrate sensitivity to typical forms of fallacious reasoning

These objectives encompass a broad array of abilities to process and use knowledge. The faculty structured a general education curriculum that captures the complexities of critical thinking in a variety of contexts. The faculty also recognizes that general education takes place throughout the college experience. This report focuses on critical thinking skills specified in two of seven general education requirements (GERs) and the freshman seminar program. In addition, the abilities to reason deductively and inductively are addressed in competency reports on scientific and quantitative reasoning.

Standards

For each of the GERs and the freshman seminar requirement (FRSM), the faculty has defined broad learning expectations and criteria for determining if those expectations are being met through curricular experiences. For this report, critical thinking is addressed in the following three contexts:

Requirement	Learning expectation related to critical thinking	Criteria used to determine if course experiences result in expected student learning: Student work:
FRSM – content-based writing-, reading- and discussion-intensive seminars	<ul style="list-style-type: none">• Students will engage in critical thinking on topics pertinent to the subject matter of the course	<ul style="list-style-type: none">• thoughtfully examines relevant positions• presents persuasive argument• uses appropriate supporting evidence

GER 5 – Literature and History of the Arts	<ul style="list-style-type: none"> Students will become familiar with the vocabulary of the discipline and be able to apply the appropriate methodologies for critical analysis. 	<ul style="list-style-type: none"> communicates in the language of the discipline uses of an appropriate methodology compares, contrasts, and evaluates literary or artistic achievements in their cultural contexts
GER 7 – Philosophical, Religious, and Social Thought	<ul style="list-style-type: none"> Students will engage in active critical analysis of evaluative or ethical theories, concepts, and methods of reasoning and deliberation in philosophical, religious or social thought. 	<ul style="list-style-type: none"> compares, contrasts, and evaluates evaluative or ethical theories, concepts, and methods of reasoning and deliberation

Description of Methodology

William & Mary uses a course portfolio methodology to evaluate general education requirements. This methodology is described in detail on the William & Mary Course Portfolio web site (<http://www.wm.edu/wmoa/generaleducation.htm>). General education requirements and the freshman seminars are reviewed on a five-year cycle. During a review, instructors teaching courses that meet a requirement are asked to construct a course portfolio. Each portfolio includes (1) the course syllabus, (2) other course material, (3) a narrative by the instructor that shows how course experiences address learning expectations, and (4) examples of student work. Faculty members submit examples of student work that show the range of performance on major assignments, tests, and projects. The Dean of Educational Policy appoints faculty members to serve on Working Groups for each of the seven GERs and the freshman seminars. Working Groups use a set of criteria to evaluate whether students are learning what the faculty expects them to learn in the general education curriculum and freshman seminars. The Working Group provides feedback to faculty members on their individual portfolios, and prepares summary reports for the Educational Policy Committee, the Assessment Steering Committee, the Dean’s Office, and department chairs and program directors.

Competency: Written Communication Assessed in: 2012-2013

Definition

The College’s Writing Program is described on the web at <http://www.wm.edu/as/writing/index.php>. All students must complete a lower-division writing proficiency. The goals of the proficiency are as follows:

Students who complete the lower-division writing proficiency should be aware of the rhetorical nature of academic writing: i.e., that the task of academic writing is to clearly and persuasively communicate their ideas. They should also learn that the process of writing includes revision and self-editing. Ultimately, they should aspire to prose that communicates complex and sophisticated ideas through a lively, intelligent, interesting human voice.

Standards

The faculty has articulated a set of skills that define a well-written essay. These skills were used to construct a common rubric for assessing writing in the freshman seminars. Each writing sample was

scored on twelve criteria using a 5-point scale (1=Beginner, 2=Developing, 3=Adequate, 4=Impressive, 5=Excellent).

Writing Assessment Rubric: Evaluation Criteria	
1	Shows awareness of an audience's needs and expectations within the context of a specific assignment and/or discipline.
2	Presents a convincing argument that is analytic, interpretive, or explanatory in nature and exhibits independent thought.
3	Articulates a focused thesis.
4	Supports the thesis with persuasive evidence.
5	Uses logical transitions to guide the reader through the stages of the argument.
6	Has an effective introduction and conclusion.
7	Contains well-structured paragraphs.
8	Uses concrete and precise language.
9	Uses an engaging style characterized by strong verbs and active voice.
10	Shows the writers command of language by avoiding disruptive grammatical errors, such as dangling modifiers, subject/verb disagreement, vague or ambiguous pronoun antecedents, and mistakes in punctuation.
11	When outside sources are used, they are integrated into the larger argument.
12	Uses a format, including documentation form, specified by the discipline or the course.

Description of Methodology

To test a new value-added approach to assessing written communication, faculty representatives in biology, English, history, and literary and cultural studies developed a common rubric and explored ways to integrate value-added into the established course portfolio methodology. Each participant designed a data collection process in which student work was collected at time one and time two, with an intervening intervention to improve writing. In the next cycle, the faculty will use the College's traditional course portfolio methodology. Each course portfolio includes (1) the course syllabus, (2) other course material, (3) a narrative by the instructor that shows how course experiences address learning expectations, and (4) examples of student work. Faculty members submit examples of student work that show the range of performance on major assignments, tests, and projects. The Dean of Educational Policy appoints faculty members to serve on Working Groups for each of the seven GERs and the freshman seminars. Working Groups use a set of criteria to evaluate whether students are learning what the faculty expects them to learn in the general education curriculum and freshman seminars. The Working Group provides feedback to faculty members on their individual portfolios, and prepares summary reports for the Educational Policy Committee, the Assessment Steering Committee, the Dean's Office, and department chairs and program directors.

Competency: Oral Communication Assessed in: 2013-2014
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Definition

The Undergraduate Curriculum at William & Mary identifies the ability “[t]o speak clearly and communicate effectively” as an important objective of a liberal education. Effective communication is clear, precise, well-organized, and appropriate to the context of the communication. The College’s Writing Resources Center and Oral Communication Studio describes three criteria used to evaluate competency in oral communication:

Content: accuracy / appropriateness / handouts or visual aids

Structure: introduction / statement of thesis / points and transitions / conclusion

Delivery: vocal style / physical presence / length

Standards

William & Mary assesses oral communication skills using a portfolio analysis of freshman seminars, a review of structured experiences in speech courses, and supplemental information from student and alumni surveys. Although the College does not have a formal oral communication requirement, these student experiences are designed to help students develop oral communication skills.

Description of Methodology

Freshman Seminar Portfolios: Freshman Seminars must include substantial discussion, and they often require formal presentations. The William & Mary faculty uses a course portfolio methodology to review freshman seminars. This methodology is described in detail on the William & Mary Course Portfolio web site (<http://www.wm.edu/wmoa/generaleducation.htm>). During a review, instructors teaching courses that meet a requirement are asked to construct a course portfolio. Each portfolio includes (1) the course syllabus, (2) other course material, (3) a narrative by the instructor that shows how course experiences address learning expectations, and (4) examples of student work. Faculty members submit examples of student work that show the range of performance on major assignments, tests, and projects. Course portfolios are reviewed by a Working Group of faculty members appointed by the Dean of Educational Policy. Each Working Group uses a set of criteria to evaluate student learning with respect to each learning expectation and to the overall purpose of the general education requirement. Portfolios were rated adequate for the communication component of the requirement if course material and student work demonstrated an appropriate sense of audience and purpose and showed effective use of dialogue skills (reading, reflecting, discussing, writing).

Analysis of speech courses: Instructors of introductory speech courses emphasize a variety of oral communication skills including interpersonal, small group, public and intercultural communication, argumentation and debate, as well as other communication skills such as listening, participating in discussions and critical thinking. Students learn different types of organizational patterns for different types of speeches. Speeches are video-taped in the introductory speech courses with feedback provided to the speaker. In addition, students learn to peer review speakers using a common rubric. Each instructor uses a rating guide appropriate to the course content.

Student and alumni surveys: The College surveys students and alumni periodically to provide information about curricular and co-curricular experiences. We conduct total population surveys so

results can be used to enhance curricular experiences at the course and department levels. Surveys include items about the extent to which William & Mary experiences contributed to developing of their speaking skills.

Competency: Quantitative Reasoning Assessed in: 2014-2015
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Definition

In developing the current general education curriculum at William & Mary, the faculty included a General Education Requirement (GER) in Mathematics and Quantitative Reasoning (GER 1). The requirement is fulfilled by satisfactory completion of a GER-designated course. The curricular description for GER 1 is defined in the general purpose and three expectations for student learning:

Purpose:

The purpose of GER1 is to expose students to analytical techniques and computational tools for addressing real world problems.

Learning expectations:

1. Students will carry out numerical calculations by hand or by using calculators or computers.
2. Students will understand why approaches and calculations used in the course work.
3. Students will apply mathematics to study real-world problems.

Standards

As described in the approved curriculum (<http://www.wm.edu/as/undergraduate/ger.php>) and outlined in the GER 1 learning expectations, courses offered by the College in fulfillment of GER 1 must:

- a. involve numerical calculations;
- b. include mathematical justifications explaining why the approaches and calculations used in the course actually work;
- c. include applications of mathematics to real-world settings or to disciplines other than mathematics.

The faculty further elaborated the requirements as follows:

- The numerical calculations in (a) may be carried out by hand, using calculators, or using computers.
- The justifications in (b) may be either mathematical proofs or careful analyses of the mathematical models used in the course, aimed at giving students experience in the process of creating appropriate mathematical models and/or understanding why one mathematical model of a given phenomenon is preferable to another.
- The applications envisioned in (c) must be recognizable as such by an educated non-mathematician. It is not enough for a GER1 course to study a family of mathematical or statistical techniques that could be used in real-world problems. To meet GER1 goal (c), a course must show how the techniques are used in the study of real-world problems.

Description of Methodology

The William & Mary faculty recently compared two approaches to assessing general education using our traditional course portfolios and modified value-added course portfolios. For the value-added approach, faculty members teaching GER courses in the Mathematics Department constructed test instruments for five courses that most undergraduates take to fulfill the GER 1 requirement. In constructing their course portfolios, the faculty members substituted the variety of work students complete during the semester with pre- and post-test scores. The department also submitted narratives describing how experiences in each GER 1 course intentionally address learning expectations in quantitative reasoning. Faculty members teaching GER 1 courses in other disciplines constructed traditional course portfolios. The Working Group that evaluated the portfolios recommended using traditional course portfolios to monitor student learning.

Competency: Scientific Reasoning Assessed in: 2014-2015
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Definition

In developing the current general education curriculum at William & Mary, the faculty included a General Education Requirement (GER) in the Natural Sciences (GER 2). The requirement is fulfilled by satisfactory completion of two GER-designated courses, one in the biological sciences and one in the physical sciences, and a laboratory associated with one of the courses.

Expectations for student learning are as follows:

1. Students will recognize and understand guiding principles, concepts, and a body of knowledge associated with a scientific discipline.
2. Students will recognize and understand the process of scientific investigation.
3. Students will appreciate the broader context of a particular scientific discipline through a basic understanding of at least three of the following:
 - A. the character of natural laws;
 - B. the role of mathematics in science;
 - C. the centrality of cause and effect reasoning to the scientific world view;
 - D. the fundamental importance of change and evolution;
 - E. the characteristic scales and proportions of natural phenomena;
 - F. the historical development of science and its cultural and intellectual context.

Standards

The approved curricular requirement (<http://www.wm.edu/as/dean/faculty/ger2.php>) states that GER courses in the Natural Sciences will:

introduce students to the enduring scientific principles that underlie many of the important issues of their times and foster an appreciation of how science relates to our wider culture. Because these issues can change over the course of a lifetime, students must be given a foundation that prepares them to further educate themselves. Such a preparation provides the student with:

1. a body of knowledge within a particular scientific discipline; and
2. an appreciation of the broader context for that knowledge.

The faculty elaborated with the following specifications: Gaining a scientific body of knowledge involves the mastery of concepts and the development of the viewpoint specific to a particular scientific discipline. It is more than simply learning a set of facts. Knowledge of a particular science and its paradigms allows understanding of (a) what types of questions should be posed and how one can go about answering them, (b) how scientific theories are developed and tested, and (c) the nature of empirical knowledge and the limits of science.

GER 2 courses also address issues that go beyond the body of knowledge of a particular discipline, such as the concepts that unify the natural sciences or how science has related to the broader cultural context.

Description of Methodology

William & Mary uses a course portfolio methodology to evaluate general education requirements. This methodology is described in detail on the William & Mary Course Portfolio web site (<http://www.wm.edu/wmoa/generaleducation.htm>). General education requirements and the freshman seminars are reviewed on a five-year cycle. During a review, instructors teaching courses that meet a requirement are asked to construct a course portfolio. Each portfolio includes (1) the course syllabus, (2) other course material, (3) a narrative by the instructor that shows how course experiences address learning expectations, and (4) examples of student work. Faculty members submit examples of student work that show the range of performance on major assignments, tests, and projects. The Dean of Educational Policy appoints faculty members to serve on Working Groups for each of the seven GERs and the freshman seminars. Working Groups use a set of criteria to evaluate whether students are learning what the faculty expects them to learn in the general education curriculum and freshman seminars. The Working Group provides feedback to faculty members on their individual portfolios, and prepares summary reports for the Educational Policy Committee, the Assessment Steering Committee, the Dean's Office, and department chairs and program directors.