

DOCUMENT N: COURSE AND PROGRAM DEVELOPMENT COVER SHEET

See Course and Program Development Policy and Procedures for Instructions

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|---|
| SCHOOL: LAW <input type="checkbox"/> MSB <input checked="" type="checkbox"/> YGCLA <input checked="" type="checkbox"/> Contact Name: Marilyn Oblak; Peggy Potthast Phone: x5260; x5342 |
| DEPARTMENT / DIVISION: Merrick School of Business; College of Liberal Arts – All Undergraduate programs |
| SHORT DESCRIPTION OF PROPOSAL (state name of action item 1-20 and course name, code & number / program affected): |
| 20. Other--Guidelines for general education and recommendation for course approval process |
| PROPOSED SEMESTER OF IMPLEMENTATION: Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> Year: 2009 |

| |
|--|
| Box 1: TYPE OF ACTION ADD(NEW) <input type="checkbox"/> DEACTIVATE <input type="checkbox"/> MODIFY <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> |
| Box 2: LEVEL OF ACTION Non-Credit <input type="checkbox"/> Undergraduate <input checked="" type="checkbox"/> Graduate <input type="checkbox"/> OTHER <input type="checkbox"/> |

| Box 3: ACTION ITEM (check appropriate boxes) | DOCUMENTS REQUIRED (see box 4 below) | IMPACT REVIEWS (see box 5 on back) | APPROVAL SEQUENCE (see box 6 on back) |
|--|--|--|---|
| 1. Experimental Course ¹ | NOP | a, c, e | AC |
| 2. Course Title | NO | | ABCD |
| 3. Course Credits | NO | | ABCD |
| 4. Course Number | NO | | ABCD |
| 5. Course Level | NO | | ABCD |
| 6. Pre & Co-Requisite | NO | | ABCD |
| 7. Course Description | NOP | | ABCDEF |
| 8. New Course | NOP | | ABCDEF |
| 9. Deactivate a Course | NO | | ABCDEF |
| 10. Program Requirements | NO | b, c, d, e | ABCDEF |
| 11a. UG Specialization (24 credits or less) | NO | a, b, c, d, e | ABCDEF |
| 11b. Masters Specialization (12 credits or less) | NO | a, b, c, d, e | ABCDEF |
| 11c. Doctoral Specialization (18 credits or less) | NO | a, b, e | ABCDEF |
| 12. Closed Site Program | NOT | e | ABCDHIK |
| 13. Program Suspension ⁹ | NO,5 | a, e | ABCDEGIK |
| 14a. Certificate Program (ug/g) exclusively within existing degree program | NO | a, c, e | ABCDEFHIK |
| 14b. Certificate Program (ug/g) where degree programs do not exist or where courses are selected across degree programs (12 or more credits) | NOQR, 6 | a, c, e | ABCDEFHJL |
| 15. Off-Campus Delivery of Existing Program | NO, 4 | a, b, c, e | ABCDHIL |
| 16a. UG Concentration (exceeds 24 credit hours) | NO, 5 | a, c, d, e | ABCDEFHJL |
| 16b. Masters Concentration (exceeds 12 credit hours) | NO, 5 | a, c, d, e | ABCDEFHJL |
| 16c. Doctoral Concentration (exceeds 18 credit hours) | NO, 5 | a, c, d, e | ABCDEFHJL |
| 17. Program Title Change | NO, 5 | a, c, d, e | ABCDEFHJL |
| 18. Program Termination | NO, 10 | d, e | ABCDEFHIK |
| 19. New Degree Program | NOQR, 3,8 | a, c, d, e | ABCDEFHJL |
| X 20. Other | Varies | Varies | Varies |

| Box 4: DOCUMENTATION (check boxes of documents included) | | | |
|---|-------------------------------|--|------------------------------|
| X | N. This Cover Sheet | | Q. Full 5-page MHEC Proposal |
| X | O. Summary Proposal | | R. Financial Tables (MHEC) |
| | P. Course Definition Document | | S. Contract |
| | | | T. Other |

- Approval of experimental course automatically lapses after two offerings unless permanently approved as a new course.
- Codes: a) Library Services (Langsdale or Law) b) Office of Technology Services c) University Relations d) Admissions
- Letter of Intent is required by USM at least 30 days before a full proposal can be submitted. Letter of Intent requires only the approval of the dean and the provost and is forwarded to USM by the Office of the Provost.
- One-page letter to include: Program title & degree/certificate to be awarded; resources requirements; need and demand; similar programs; method of instruction; and oversight and student services (MHEC requirement)
- One-page letter with description and rationale (MHEC requirement)
- One or two-page document that describes: centrality to mission; market demand; curriculum design; adequacy of faculty resources; and assurance program will be supported with existing resources. (MHEC requirement)
- Learning objectives, assessment strategies; fit with UB strategic plan
- Joint Degree Program or Primary Degree Programs require submission of MOU w/ program proposal. (MHEC requirement)
- Temporary suspension of program to examine future direction; time not to exceed two years. No new students admitted during suspension, but currently enrolled students must be given opportunity to satisfy degree requirements.

DOCUMENT N: COURSE AND PROGRAM DEVELOPMENT COVER SHEET (Page 2 of 2)

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| SHORT DESCRIPTION OF PROPOSAL (state name of action item 1-20 and course name, code & number / program affected): |
| 20. Other--Guidelines for general education and recommendation for course approval process |

10. Provide:
- a. evidence that the action is consistent with UB mission and can be implemented within the existing program resources of the institution.
 - b. proposed date after which no new students will be admitted into the program;
 - c. accommodation of currently enrolled students in the realization of their degree objectives;
 - d. treatment of all tenured and non-tenured faculty and other staff in the affected program;
 - e. reallocation of funds from the budget of the affected program; and
 - f. existence at other state public institutions of programs to which to redirect students who might have enrolled in the program proposed for abolition.
11. University Council *review* (for a recommendation to the President or back to the Provost) shall be limited to curricular or academic policy issues that may potentially affect the University's mission and strategic planning, or have a significant impact on the generation or allocation of its financial resources.

| Box 5: IMPACT REVIEW | SIGNATURES (see procedures for authorized signers) | DATE |
|--|--|------|
| a. Library <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached | Director or designee: | |
| b. OTS <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached | CIO or designee: | |
| c. University Relations <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached | Director or designee: | |
| d. Admissions <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached | Director or designee: | |
| e. Records <input type="checkbox"/> No impact <input type="checkbox"/> Impact statement attached | Registrar or designee: | |

| Box 6: APPROVAL SEQUENCE | APPROVAL SIGNATURES | DATE |
|---|---|---------|
| A. Department / Division | Chair: <i>Margaret Potthust; Marilyn Oslar</i> | 4/20/09 |
| B. Final faculty review body within each School | Chair: <i>[Signature]</i> | 5/28/09 |
| C. College Dean | Dean: <i>Larry W. Duman; Marilyn Oslar</i> | 5/21/09 |
| D. Provost and Senior Vice President for Academic Affairs | Provost: <i>Mary Weber for Susan Zauer</i> | 6/1/09 |
| E. Curriculum Review Committee (UFS subcommittee) | Chair: <i>Dety [Signature]</i> | 6/5/09 |
| F. University Faculty Senate (UFS option) | Chair: | |
| G. University Council (see # 11 above) | Chair: | |
| H. President | President: | |
| I. Board of Regents – notification only | | |
| J. Board of Regents – approval | | |
| K. MHEC – notification only | | |
| L. MHEC – approval | | |
| M. Middle States Association notification | Required only if the mission of the University is changed by the action | |

DOCUMENT O: SUMMARY PROPOSAL

See Course and Program Development Policy and Procedures for Instructions

| | | |
|---|--|----------------------------|
| SCHOOL: LAW <input type="checkbox"/> MSB <input checked="" type="checkbox"/> YGCLA <input checked="" type="checkbox"/> | Contact Name: Marilyn Oblak; Peggy Potthast | Phone: x5260; x5342 |
| DEPARTMENT / DIVISION: Merrick School of Business; College of Liberal Arts – All Undergraduate programs | | |
| SHORT DESCRIPTION OF PROPOSAL (state action item 1-23 and course name & number or program affected): | | |
| 20. Other--Guidelines for general education and recommendation for course approval process | | |
| PROPOSED SEMESTER OF IMPLEMENTATION: Fall <input checked="" type="checkbox"/> Spring <input type="checkbox"/> Year: 2009 | | |

O-1: Briefly describe what is being requested:

Revision of guidelines for general education courses in the following areas:
 Arts and Humanities
 Biological and Physical Sciences
 English Composition
 IT Fluency (represents also a name change in this requirement from Computer Literacy to IT Fluency)
 Mathematics
 Social and Behavioral Sciences
 Speech Communication

Revision of guidelines for meeting graduation requirement in Information Literacy.

Also this proposal includes a recommendation for review and approval of courses for general education during a continuing transitional period.

| For new courses or changes in existing courses (needed by Registrar) | | |
|--|-------------------------------|-----------------|
| OLD Title: | Course # / HEGIS Code: | Credits: |
| NEW Title: | Course # / HEGIS Code: | Credits: |

O-2: Set forth the rationale for the proposal:

When FSP was first established the Lower Division Education Implementation Committee established subcommittees of faculty members to prepare guidelines for general education courses that would be in conformity with COMAR and MHEC requirements and also support the UB Undergraduate Learning Goals and best practices in the areas of general education. These guidelines served their purpose but in the two years that have passed we discovered that some needed modification and change in order for us to proceed with development of general education.

In the spring 2009 semester a new Ad Hoc Committee for General Education was established to review these guidelines, to make certain that learning outcomes were adequately written to clearly represent what must be present in general education courses in each of the required areas. These proposed guidelines are the outcome of that process.

The Ad Hoc Committee for General Education also recommends a process (similar to the one currently in practice) for approval of general education courses during what is a continuing transitional period (see memorandum from committee).

MEMORANDUM

To: Undergraduate Curriculum Committees of CLA and MSB

From: 2009 Ad Hoc General Education Committee

Topic: General Education Guidelines and recommended review process

Date: Monday, April 20, 2009

Included in the charge to the 2009 Ad Hoc General Education Committee was revision of the guidelines for developing UB general education courses. In this semester we have worked on new guidelines with a goal to alleviating some of the problems that surfaced while using the current guidelines during the past three years. We also are recommending a process for the way in which the guidelines should be used in review of courses. Our results are now being passed on to you.

Attached are the revised guidelines for the development of new courses in

- a. the seven areas of general education; and
- b. information literacy, a graduation requirement.

We ask that you review **the guidelines and the process outlined below** and give timely approval to both for an effective date of fall 2009.

The final step in the review process is the University Faculty Senate and its subcommittee, the Curriculum Review Committee, which has final approval.

The six main areas of general education are: arts and humanities, biological and physical sciences, English composition, mathematics, social and behavioral sciences, and speech communication. In addition UB has included a computer literacy requirement in the seventh area known as interdisciplinary studies and emerging issues. You will note that we are recommending a change in the "name" of this computer literacy requirement; we suggest **IT fluency**. (We do not want to use the full name, information technology fluency, because we believe the requirement will become confused with the information literacy requirement; so we abbreviate.)

Because UB is still in transition with regard to undergraduate education, our recommendation is that we continue with the current general education review process as established by the University Faculty Senate and its subcommittee, the Curriculum Review Committee. This means that course proposals (for new or revised general education courses) would first undergo review and approval in the department/division and would then be sent to the General Education Review Committee (see below*) prior to submission to the curriculum committee. The General Education Review Committee will examine the

course proposal to be sure that the learning outcomes for general education (item III of the guidelines documents submitted for approval) have been addressed. Once certified by the General Education Review Committee the course can be submitted to the undergraduate curriculum committee of the school and sent through the rest of the approval process.

In determining that the General Education Review Committee should examine proposals only in light of the learning outcomes listed in item III of the guidelines document, the 2009 Ad Hoc General Education Committee expects that undergraduate curriculum committees in each school/college carefully examine each new course to determine that all the learning outcomes (whether discipline specific or general education) are measurable and methods of assessing the students' attainment of those outcomes are included.

*The General Education Review Committee consists of the Director of FSP and the chairs of the Undergraduate Curriculum Committees of CLA and MSB. Courses needing approval as general education can be sent to any of the three members.

Members of the 2009 Ad Hoc General Education Committee:

Arts and Humanities (includes speech communication)

Kelly Carr, Virginia Carruthers, Fred Guy, Steve Matanle, Betsy Nix, Daniel Page, Jon Shorr

Biological and Physical Sciences

Ron Castanzo, Stan Kemp

IT Fluency

Danni Fowler, Stuart Moulthrop, Charles Sykes

English Composition

Chris Justice, Maria Plochocki

Mathematics

Gargi Bhattachryya, Marilyn Oblak, Peggy Potthast

Social and Behavioral Sciences

Kathy Block, Ron Castanzo, Kristen Eyssell, Gina Finelli, Dan Gerlowski, Don Haynes, John Windmueller

Members at large

Jim Dutt, Marguerite Weber

Library Faculty for Information Literacy:

Thomas Arendall-Salvetti, Lucy Holman, Catherine Johnson, Michael Shochet



General Education Arts and Humanities Guidelines

I. State of Maryland Guidelines/Mandates

A. COMAR/MHEC

The general education requirement for public institutions is one course [of at least three credit hours] in each of two disciplines in arts and humanities. Courses that may be included in the arts area are fine arts, performing and studio arts, appreciation of the arts, and history of the arts. Courses in the humanities area may include the language, history, literature and philosophy of Western and other cultures. In addition, the following possibilities for the arts and humanities area are offered:

1. A public institution may allow a speech communication or foreign language course to be part of the arts and humanities category.
2. Composition and literature courses may be placed in the arts and humanities area if literature is included as part of the content of this course.

B. Special Attributes of General Education Arts and Humanities Courses (From General Education Implementation Guiding Principles, Appendix D, approved by Maryland Inter-segmental Chief Academic Officers Group April 14, 1999)

Arts and Humanities courses

- Develop the students' ability to express themselves in a competent, reasonable, and responsible manner;
- Advance the students' appreciation of communication through the representation of thoughts and ideas;
- Foster an understanding of human values, experience, and environment;
- Provide students with
 - An understanding of historical context (the relationships to other times and cultures),
 - The medium of communication (including the analysis and assessment of the actual means of expression),
 - The views of others (by accommodating and appreciating different values and ideas), and
 - The ability to expound one's own values.

General education courses in the arts and humanities should also develop in the student

- An ability to engage in oral and written expression;
- A proficiency in analysis;
- A facility for reading and listening;
- A capacity for and exercise of creativity (including new and original interpretations);
- An appreciation of expression (written, visual art, or performing art);
- A nurturance of good citizenship and personal responsibility.

II. UB Learning Goals related to Arts and Humanities General Education

The UB Undergraduate Learning Goals include the following outcomes related to the area of arts and humanities.

1. Communicating effectively in various media
 - a. express ideas and facts to others effectively in a variety of written formats
 - d. comprehend, interpret and analyze texts
2. Developing a knowledge and skills base
 - c. modify one's approach to an issue or problem based on the contexts and requirements of particular situations (adaptability)
 - d. understand the broader societal context within which one lives and works (cultural literacy)
4. Growing in enthusiasm for the pursuit of excellence throughout a lifetime of learning
 - a. develop broad interests and intellectual curiosity
 - d. recognize the importance of aesthetics in their personal lives and to society
6. Thinking critically and creatively, analyzing and synthesizing information to solve problems
 - a. analyze complex issues and make informed decisions
 - b. synthesize information to arrive at reasoned conclusions
 - c. evaluate the logic, validity and relevance of data
 - d. solve challenging problems
 - e. use knowledge and understanding to generate and explore new questions

III. Learning Outcomes for General Education Arts and Humanities

Students will be able to

1. Define and apply terms and concepts used in the study of a given arts/humanities discipline;
2. Write analytically, using, when appropriate, research and documentation;
3. Demonstrate critical thinking in their written or oral discussion of course-related content;
4. Explain the distinctive ways in which ideas are communicated within a given discipline;
5. Discuss relevant aspects of the historical or cultural contexts from which ideas and ways of communicating emerge.

IV. Pedagogy

The following are characteristics of effective teaching of general education in these arts and humanities disciplines:

ARTS

Class time, assignments, and projects should be designed to give students the opportunity to:

1. Gain broad aesthetic awareness, using terms and concepts from the discipline to give structure to that experience;
2. View, hear, or otherwise experience significant works of art with close attention to detail;
3. Develop critical thinking and analytical writing skills;
4. Discover ways that artistic works may be interpreted, including the distinctive ways in which ideas are communicated through particular art forms and the influences of historical and cultural contexts on works of art and artistic movements; and
5. Write analytically, using appropriate documentation.

HISTORY

Class time, assignments, and projects should be designed to give students the opportunity to:

- i. Analyze primary source documents in the classroom in order to develop the skills of historical thinking, including: the terms and concepts used in the study of history; the questions historians ask and the ways in which history is communicated; and the relevant aspects of the historical or cultural contexts from which ideas emerge;
- ii. Create hands-on research projects that develop the information literacy, organizational, and historical thinking skills needed to write analytically;
- iii. Develop oral communication skills and practice communicating historical ideas and content in a discipline-appropriate manner, through oral presentations and participation in class discussion;

- iv. Develop critical thinking and analytical writing skills through essay examinations and paper assignments; and
- v. Develop broad cultural awareness as well as in-depth knowledge by reading texts written by a variety of authors.

LITERATURE

Class time, assignments and projects should be designed to give students the opportunity to:

1. Read significant works of literature with close attention to detail, using terms and concepts from the discipline to give structure to that experience and developing an appreciation for uniquely literary ways of communicating ideas;
2. Develop critical thinking skills through class discussion and written assignments;
3. Develop an awareness of the historical and cultural contexts within which literary works may be interpreted;
4. Develop an ability to write analytically, using appropriate documentation.

PHILOSOPHY

Class time, assignments and projects should be designed to give students the opportunity to:

1. Gain awareness of the structure of philosophical arguments found in the readings;
2. Gain awareness of the historical and cultural context in which the arguments in the reading were made;
3. Practice interpreting philosophical arguments from the readings through both class discussion and written assignments;
4. Practice engaging in philosophical arguments through both class discussion and written assignments;
5. Demonstrate their understanding of the readings through class discussion, tests and quizzes, and written assignments.

V. Assessment

The following procedures are recommended as strategies for assessing the arts and humanities learning outcomes:

- a. Students will be required to write one term paper or two shorter papers (totaling 2000-2500 words). The quality of these papers will be measured by means of a rubric that addresses the degree to which the papers meet arts and humanities learning outcome #3 and at least three of the other four arts and humanities learning outcomes, as defined in the paper assignment(s). If two papers are assessed, they should show improvement over the course of the academic term.
- b. Students will write several short critical responses to assigned readings, creative works, and/or historical writings characteristic of the arts or humanities discipline(s) addressed in the course. These short essays (approximately 200

words) may be assigned as out-of-class writing (via either an online forum or submitted copy) or in-class exercises. This rubric-based assessment strategy evaluates the application of learning outcomes 1 and 2 plus at least one of the other learning outcomes (3, 4, and/or 5).

- c. Students will take mid-term and/or final examinations testing learning outcomes 1, 2, 4, and 5.
- d. A formal in-class presentation may be substituted for assessment strategy (a) or (b), provided that the assignment design allows the quality of each student's presentation to be measured for the same learning outcomes as strategies (a) or (b).
- e. Students may be required to write critiques of other students' short written assignments and/or in-class presentations. These critiques would measure outcomes 1 and 5 across a range of artifacts broader than those selected by students for their own, individual assignments. This strategy can potentially address outcomes 3 and 4, according to the specific arts or humanities discipline(s) being studied.

Faculty committee developing these guidelines:

Kelly Carr, Virginia Carruthers, Fred Guy, Steve Matanle, Elizabeth Nix, Daniel Page, Jon Shorr

Date: April 14, 2009



General Education Biological and Physical Sciences Guidelines

I. State of Maryland Guidelines/Mandates

- A. The State of Maryland general education requirement (Code of Maryland Regulations [COMAR] Section 13B.06.01.03.C(3) [<http://www.dsd.state.md.us/comar/13b/13b.06.01.03.htm>]) for public institutions is two science courses, one of which must be a laboratory course. One laboratory credit requires a minimum of 30 supervised laboratory hours per semester. Consequently, students are usually required to take a 3-credit non-laboratory course and a 4-credit laboratory course.

- B. The Maryland Intersegmental Chief Academic Officers' *General Education Implementation Guiding Principles* states that (Appendix E [<http://mdcao.usmd.edu/app-bp.html>]) the "major goal of general education courses in biological and physical sciences is to actively involve students in the process of science". Furthermore, the important learning objectives for students are:
 1. To achieve scientific literacy including proficiency in evaluating reports on science, discriminating among sources, and presenting the concept of peer review;
 2. To discriminate science from non-science and to demonstrate that science constitutes the testing of hypotheses about natural phenomena through observation;
 3. To know how to access specific scientific information on a topic;
 4. To attain familiarity with some of the tools of science and to have opportunities to use technology to gather and process data;
 5. To acquire proficiency in the quantitative aspects of science, with an appreciation of the role of variability in the quantitative evaluation of data; and
 6. To demonstrate an understanding of the fundamental concepts of the discipline(s).

II. UB Undergraduate Learning Goals related to General Education in the Biological and Physical Sciences

The UB Undergraduate Learning Goals include the following outcomes related to the area of the biological and physical sciences.

7. Attaining quantitative and scientific knowledge and skill
 - c. discriminate science from nonscience and demonstrate an understanding of the scientific method

- d. attain knowledge of some of the tools of science and to gather and process data

III. Learning Outcomes for General Education Science

Upon completion of the course, students will be able to:

1. evaluate scientific reports and discriminate among sources (including peer-reviewed sources);
2. discriminate science from non-science and demonstrate that science constitutes the testing of hypotheses about natural phenomena through observation;
3. access specific scientific information on a topic;
4. use some of the technology commonly used by scientists to gather and process data [optional for non-laboratory courses];
5. quantify and evaluate scientific data and demonstrate an appreciation of the role of variability in this process; and
6. discuss the fundamental terminology, concepts, and significant historic figures of the discipline being taught.

IV. Pedagogy

1. Instruction will provide a firm grounding in the philosophy of science, while exposing students to scientific approaches to explaining natural phenomena.
2. Instructors will introduce students to the scientific method and the nature of scientific research.
3. Students will learn how to access, evaluate, and use the scientific literature in completing written assignments.
4. An introductory text will be chosen that is appropriate for general education science courses.
5. Laboratory classes will provide students with closely supervised, practical experience in scientific investigation and reporting.
6. Faculty and students will utilize appropriate technology and equipment in the collection, analysis, and evaluation of scientific data.
7. Students will be evaluated using the following methods:
 - (a) Non-laboratory courses should include at least two exams/quizzes (three or more is recommended) and at least one writing assignment that requires the student to utilize the peer-reviewed literature in the discipline being taught. Reflections and reactions from field trips, summary reports of assigned articles, oral presentations, and other assessment tools are also possible, but not essential.
 - (b) Laboratory courses should include at least two exams/quizzes (three or more is recommended), at least one writing assignment that requires the student to utilize the peer-reviewed literature in the discipline being taught, at least one laboratory exercise that involves the collection, recording, and evaluation of

scientific data, and the writing of at least one scientific report in standard scientific format (i.e. introduction, methodology, results, discussion, and conclusion). Reflections and reactions from field trips, summary reports of assigned articles, oral presentations, and other assessment tools are also possible, but not essential.

V. Assessment

- A. To be able to evaluate scientific reports and discriminate among sources (including peer-reviewed sources).

This learning goal can be assessed through

- assigning peer-reviewed articles to students to read and summarize; or
- having students read and evaluate scientific reports written by other students (i.e., students acting as peer reviewers and having their reviews evaluated).

- B. To be able to discriminate science from non-science and demonstrate that science constitutes the testing of hypotheses about natural phenomena through observation.

This learning goal can be assessed through

- pertinent questions on exams/quizzes or homework; or
- the writing of laboratory and other kinds of scientific reports.

- C. To be able to access specific scientific information on a topic.

This learning goal can be assessed through

- assigning peer-reviewed articles to students to read and summarize; or
- writing assignments that utilize the scientific literature.

- D. To be able to use some of the technology commonly used by scientists to gather and process data [optional for non-laboratory courses];

This learning goal can be assessed through

- the utilization of appropriate methods of data presentation in laboratory and other kinds of scientific reports; or
- laboratory exercises that involve the use of the microscope and subsequent detailed description of observed specimens;
- pertinent questions on exams/quizzes or homework.

- E. To be able to quantify and evaluate scientific data and demonstrate an appreciation of the role of variability in this process.

This learning goal can be assessed through

- the writing of laboratory and other kinds of scientific reports; or
- pertinent questions on exams/quizzes or homework.

- F. To be able to demonstrate an understanding of the fundamental terminology, concepts, and significant historic figures of the discipline being taught.

This learning goal can be assessed through

- pertinent questions on exams/quizzes or homework.

Faculty committee developing these guidelines:

Ronald Castanzo, Stanley Kemp

Date:

April 14, 2009



General Education English Composition Guidelines

I. State of Maryland Guidelines/Mandates

A. COMAR/MHEC

The general education requirement for public institutions is one three-credit course in English composition.

B. Special Attributes of General Education English Composition Courses (from the Maryland Chief Academic Officers' "Statement of Expectations – Freshman Writing")

A general education English composition course must

1. Be informed by current research and scholarship in rhetoric and composition; and
2. Advance students' understanding of themselves as writers, including understanding that they participate with others in public discourse and have moral and ethical responsibilities in that discourse.

C. Maryland's Attributes for College-Level English Composition Courses (the following information is from the "Statement of Expectations – Freshmen Writing" at <http://mdcao.usmd.edu/app-eng.html>.)

Students who earn credits in English composition courses should write thoughtful, well-organized expository prose in Standard American English. Students should be able to...

1. Write and support a thesis;
2. Inform, explain, and persuade;
3. Address a range of audiences effectively;
4. Employ advanced conceptual skills such as analyzing, synthesizing, and evaluating; and
5. Support claims and generalizations with adequate and pertinent examples, details, or evidence.

II. UB Learning Goals related to General Education English Composition

The UB Undergraduate Learning Goals include the following outcomes related to the area of English composition.

1. Communicating effectively in various media
 - a. express ideas and facts to others effectively in a variety of written formats
 - c. make efficient use of information resources and technology for personal and professional communication
 - d. comprehend, interpret and analyze texts

6. Thinking critically and creatively, analyzing and synthesizing information to solve problems
 - a. analyze complex issues and make informed decisions
 - b. synthesize information to arrive at reasoned conclusions
 - c. evaluate the logic, validity and relevance of data
 - d. solve challenging problems
 - e. use knowledge and understanding to generate and explore new questions

III. Learning Outcomes for General Education English Composition

1. Write academic, professional expository prose using accepted standards of grammar and mechanics;
2. Use a writing process to improve their prose;
3. Inform, explain, and persuade;
4. Address a range of audiences effectively;
5. Write and support a thesis;
6. Employ advanced conceptual skills such as analyzing, synthesizing, and evaluating;
7. Support claims and generalizations with adequate and pertinent examples, details, or evidence;
8. Make efficient use of information resources and technology; and
9. Comprehend, interpret, and analyze texts.

IV. Prerequisite Skills for Success

Students will have demonstrated writing competencies by their performance on placement tests or in developmental prerequisite course work.

V. Pedagogy

Effective teaching in general education English composition courses offers students...

1. Learning opportunities to engage in various aspects of the writing process;
2. Peer reviews and collaborative writing opportunities;
3. Opportunities to choose their own writing topics;
4. Detailed information about assignments such as the specific audience, due dates, documentation style, etc.;
5. Clear criteria for assessment (such as rubrics);
6. Clear feedback that enables them to learn and grow as writers;
7. Exposure to a variety of rhetorical tasks; and
8. Reading assignments designed to enhance their writing skills.

VI. Assessment

To assess whether or not these learning outcomes are being met, the following assessment strategies are recommended:

1. Pre- and post-test evaluations;
2. Standardized rubrics;
3. Exit writing exams;
4. End-of-semester student surveys; and
5. Assessments of students' skill transferability as evidenced by their writing in other courses outside English composition.

VII. Differences between Lower-level and Upper-level General Education English Composition Courses

When UB requires students to earn credits in two 3-credit general education English composition courses (such as WRIT 101 *College Composition* and WRIT 300 *Advanced Expository Writing*), the advanced elements of the upper level course allow students to...

1. Analyze more complex rhetorical tasks in greater depth and breadth and adapt their writing accordingly;
2. Utilize various sources and types of feedback on their writing, such as instructor and peer, in a public, digital learning environment;
3. Enhance their writing skills to move beyond error analysis; and
4. Apply what they've learned in lower-level writing courses to discipline-specific writing and reading tasks.

Faculty committee developing these guidelines: Christopher Justice, Maria Plochocki

Date: April 14, 2009



General Education IT Fluency Guidelines

I. State of Maryland Guidelines/Mandates

A. COMAR/MHEC

No specific COMAR guidelines exist; IT Fluency is still considered an emerging issue in General Education in Maryland. There was, however, a technology fluency resolution passed by the USM Board of Regents in 2000.

B. USM BOR Technological Fluency Competencies/Technology Fluency Resolution (Board of Regents, 2000)

The Board of Regents adopted a technology fluency requirement in 2000. The formative source of their guidelines was a 1999 report on technology fluency by the Committee on Information Technology Literacy of the National Research Council. From the BOR guidelines: when an institution asserts that its graduates are “technologically fluent”, the implication is that those students

- possess skills such as managing a personal computer, using word processing, network browsers, mail, and spreadsheet software, or understanding an operating system;
- have a sufficient understanding of the conceptual foundation underlying information technology to permit them to upgrade their skills as technology changes, and
- possess intellectual capabilities that permit them to construct a mental model of how a specific application is (or is not) working, a model that enables reflective thought about what might be done to fix a problem, or how a new application might work, so as to enable them to deal with unexpected consequences and make appropriate decisions about using information technology.

C. Special Attributes of General Education IT Fluency Courses

(From General Education Implementation Guiding Principles, Appendix G, approved by Maryland Inter-segmental Chief Academic Officers, February 6, 1997)

IT Fluency falls under the Interdisciplinary and Emerging Issues Area.

Recommendations for courses in this category include:

“J. General Education courses shall reflect current scholarship in the discipline and provide reference to theoretical frameworks and methods of inquiry appropriate to academic disciplines.

K. Courses that are theoretical may include applications, but all applications courses shall include theoretical components if they are to be included as meeting General Education requirements.

L. Public institutions may incorporate knowledge and skills involving the use of quantitative data, effective writing, information retrieval, and information literacy when possible in the General Education program.”

II. UB Learning Goals related to General Education IT Fluency

The UB Undergraduate Learning Goals include the following outcomes related to the area of IT fluency.

1. Communicating effectively in various media
 - c. make efficient use of information resources and technology for personal and professional communication
2. Developing a knowledge and skills base
 - a. acquire substantial knowledge and understanding of at least one field of study (intellectual depth)
4. Growing in enthusiasm for the pursuit of excellence throughout a lifetime of learning
 - c. make effective use of information resources and technology
6. Thinking critically and creatively, analyzing and synthesizing information to solve problems
 - c. evaluate the logic, validity and relevance of data
7. Attaining quantitative and scientific knowledge and skills
 - d. attain knowledge of some of the tools of science and to gather and process data

III. Learning Outcomes for General Education IT Fluency

Students will be able to:

1. Explain the basic principles underlying the function of modern information resources, such as computers, networks, and software tools;
2. Explain appropriate uses of information technology, including the scope and limits of its benefits, and controversies concerning issues like privacy, intellectual property, and equal access;
3. Explain the process of constant innovation that characterizes information technology, requiring critical evaluation of new developments, adaptation of existing practices, and anticipation of change;
4. Create and structure documents with hypertext links and graphics in a range of formats, including conventional page presentation as well as screen presentation using appropriate software;
5. Locate and access information and collaborate in shared activities using the internet and other digital services;

6. Develop and manipulate quantitative data and other structured information using analytical and visualization tools, especially spreadsheets;
7. Access existing structured information, and create original data structures using a database system.

IV. Pedagogy

The following are characteristics of effective teaching of General Education IT Fluency:

1. Interactive learning, particularly lab-based work.
2. Contextually rich learning tasks:
 1. Immersion in the technologies involved;
 2. Skill learning embedded
3. In-class examination/demonstration of learning is important, given the relative ease with which students could rely on outside parties to complete assessment.

V. Assessment

The first three learning outcomes focus on the student's ability to explain (principles, use of) technology and can be assessed via student presentations, quizzes and exams. Outcomes four through seven involve the use of software applications, and are better assessed by assignment or in-class exercise/lab work

While each objective could be measured in all courses approved as satisfying the IT fluency general education requirement, alternatively 1 -2 objectives could be assessed each semester. In either case similar exam questions and assignments could be used in all sections being taught in a specific semester.

Faculty committee developing these guidelines: Danielle Fowler, Stuart Moulthrop, Charles Sykes

Date: April 14, 2009



UB General Education Math Guidelines

I. State of Maryland Guidelines/Mandates

A. COMAR

The General Education requirement for public institutions is one course in mathematics at or above the level of college algebra.

B. Special Attributes of General Education Math Courses – including statistics

(From General Education Implementation Guiding Principles, Appendix C, approved by Maryland Inter-segmental Chief Academic Officers, February 6, 1997)

All General Education mathematics courses must

1. Have performance expectations demonstrating a level of mathematical maturity beyond high school Algebra II (intermediate algebra)
2. Include development of problem-solving skills, analysis and synthesis, which introduce students to “ways of thinking” in mathematics
3. Introduce mathematical concepts and techniques that can be applied in further study of mathematics and/or other disciplines
4. Explore mathematical applications in other disciplines

C. Maryland’s Attributes for College-Level Math Courses

(From General Education Mathematics Requirement in Maryland, approved by Statewide Mathematics General Education Subcommittee, June 14, 2002)

Upon successful completion of such a course, which always has a prerequisite level of mathematical maturity that includes intermediate algebra (in college) or the traditional algebra II (in high school), the student should be able to:

1. Interpret mathematical models given verbally, or by formulas, graphs, tables, or schematics, and draw inferences from them,
2. Represent mathematical concepts verbally, and where appropriate, symbolically, visually, and numerically,
3. Use arithmetic, algebraic, geometric, technological, or statistical methods to solve problems,
4. Use mathematical reasoning, e.g. to solve problems, to formulate and test conjectures, to judge the validity of arguments, to formulate valid arguments, and to communicate the reasoning and the results,
5. Estimate and check answers to mathematical problems in order to determine reasonableness,

6. Recognize and use connections within mathematics and between mathematics and other disciplines.

II. UB Learning Goals related to General Education Mathematics

The UB Undergraduate Learning Goals include the following outcomes related to the area of mathematics.

7. Attaining quantitative and scientific knowledge and skills
 - a. solve problems that are quantitative in nature and appreciate the ways of thinking in mathematics
 - b. use mathematical concepts and techniques that can be applied in other disciplines

III. Learning Objectives for General Education Mathematics

Students will be able to:

1. Interpret mathematical models given verbally, or by formulas, graphs, tables, or schematics, and draw inferences from them;
2. Represent mathematical concepts verbally, and where appropriate, symbolically, visually, or numerically;
3. Use arithmetic, algebraic, geometric, technological, or statistical methods to solve problems;
4. Use mathematical reasoning to solve problems, to formulate and test conjectures, to judge the validity of arguments, to formulate valid arguments, and to communicate the reasoning and the results;
5. Estimate and check answers to mathematical problems in order to determine reasonableness;
6. Apply mathematical and statistical tools in solving problems of business, science, or the social sciences.

IV. Prerequisite Skills for Success

Mathematics skills of a person who has recently passed traditional high school algebra II or college-level intermediate algebra are necessary for success in general education mathematics courses. The University identifies those students who possess the prerequisite skills through mandatory placement testing.

V. Pedagogy

The following are characteristics of effective teaching of general education mathematics:

1. Mathematics concepts are introduced and developed in the context of real, understandable, problem-solving situations;

2. Mathematics instruction involves active student participation;
3. Faculty and students make effective use of appropriate technology;
4. A text which is suitable for undergraduates is carefully chosen;
5. Instruction follows the chosen text to reduce student confusion;
6. Evaluation of student learning includes a combination of frequent quizzes, graded homework, applications projects (as suitable) and comprehensive examinations.

VI. Assessment

Over the course of three years (one objective per semester) all learning objectives can be assessed. Within a given semester one of the following procedures could be used:

- a. sections of courses qualified as general education mathematics which are being offered would be randomly sampled; an assignment, series of test questions or other evaluation relevant to each course would be designed to measure the objective using course embedded assessment; OR
- b. all courses qualified as general education mathematics would focus on a selected objective; in each section being offered an assignment, series of test questions or other evaluation would be designed to measure the objective; students' work would be randomly sampled from all sections for assessment purposes.

For each general education course a set of suggested exercises or test questions could be designed for measuring each outcome. These would be general so that the individual faculty member can select from a test bank or create them anew within each semester.

Faculty Committee: Gargi Bhattachryya, Marilyn Oblak, Peggy Potthast

Date: April 14, 2009



General Education Social and Behavioral Sciences Guidelines

I. State of Maryland Guidelines/Mandates

A. COMAR/MHEC

The General Education requirement for bachelor degrees granted at public institutions in Maryland is at least one course in each of two disciplines in social and behavioral sciences (6 credits total).

B. Maryland's Attributes for College-Level Social and Behavioral Sciences Courses

(MHEC Recommendations of the Social and Behavioral Sciences Area Group, addressing the definition of Social and Behavioral Sciences in COMAR 13B.06.01.02(16).)

Social and behavioral sciences means courses that examine the ways in which individuals, groups, institutions, or segments of societies behave, function, and influence one another. They introduce students to the variety of methods to collect, analyze, interpret, and apply qualitative and quantitative data as related to social phenomena and individual behavior.

General education courses in the social and behavioral sciences must better prepare students:

- to be familiar with a broad spectrum of fundamental concepts to the disciplines represented by each of the fields studied;
- to understand and appreciate the interaction of the numerous factors that influence individuals, cultures, society, and the natural environment;
- to use the concepts, theories, and methods of the social and behavioral sciences to analyze individuals, groups, institutions, and societies, both past and present; and
- to apply knowledge to identify and evaluate solutions to personal, cultural, societal, national, and international problems to make responsible and informed decisions.

II. UB Learning Goals related to General Education in the Social and Behavioral Sciences

The UB Undergraduate Learning Goals include the following outcomes related to the area of social and behavioral sciences.

2. Developing a knowledge and skills base
 - d. understand the broader societal context within which one lives and works (cultural literacy)
3. Engaging with others to take responsibility for our local and global communities
 - d. understand the interconnectedness of global, local and personal concerns
6. Thinking critically and creatively, analyzing and synthesizing information to solve problems
 - a. analyze complex issues and make informed decisions

III. Learning Outcomes for General Education Social and Behavioral Sciences

Social and behavioral sciences General Education courses enable students to:

1. Explain how and why human conduct and behavior more generally are subject to scientific inquiry.
2. Describe the kinds of questions social scientists ask and the ways they go about answering those questions.
3. Discuss major and fundamental concepts, theories, models, and issues within the field of study.
4. Compare and contrast the numerous factors and institutions that influence individuals, cultures, society, and the natural environment.
5. Describe and illustrate appropriate methodologies used by social scientists to explore social phenomena and to identify and evaluate solutions to personal, cultural, societal, national, and/or global problems.

IV. Pedagogy

The following are characteristics of effective teaching of general education social and behavioral sciences courses:

1. Social and behavioral sciences courses should be introduced in the context of real, understandable, problem-solving situations.
2. Effective instruction should involve active student participation.
3. Faculty and students should make effective use of appropriate technology.
4. There should be careful selection of a text suitable for undergraduate students. Faculty are encouraged to consider the cost of the text and any supplemental readings in light of the educational benefits delivered. Where appropriate, faculty are encouraged to make less use of supplemental readings than is done in upper-level and graduate courses.
5. To avoid confusion, instruction should follow the chosen text.
6. Evaluation methods should reflect accepted practices for measurement of student learning and be appropriate given faculty pedagogy and teaching methods. It is recommended that the student's semester grade

be based on numerous substantive graded components versus fewer graded components.

V. Assessment

Over the course of five years (one outcome per year), all learning outcomes could be assessed. Within a given year, one of the following procedures could be used:

- a. sections of courses offered within each discipline that qualify as general education social and behavioral sciences would be randomly sampled; an assignment, series of test questions, or other evaluation relevant to each course would be designed to measure the objective using course embedded assessment; OR
- b. all courses qualified as general education social and behavioral sciences within each discipline would focus on a selected outcome; an assignment, series of test questions or other evaluation would be designed to measure the outcome in each section offered; students' work would be randomly sampled from all sections within each discipline for assessment purposes.

A set of suggested exercises or test questions for each general education course could be designed for measuring each outcome. These would be general so that individual faculty members could select from a test bank or create anew each semester.

Faculty committee developing these guidelines: Kathy Block, Ron Castanzo, Kristen Eyssell, Gina Finelli, Dan Gerlowski, Don Haynes, John Windmueller

Date: April 14, 2009



General Education Speech Communication Guidelines

I. State of Maryland Guidelines/Mandates

A. COMAR/MHEC

COMAR allows, but does not require, speech communication as part of the arts and humanities category.

B. Maryland's Attributes for College-Level Speech Communication Courses

(From General Education Implementation Guiding Principles, Appendix D, approved by Maryland Inter-segmental Chief Academic Officers Group April 14, 1999)

Speech Communication meets both the definitional and skills components of the arts and humanities requirements, according to Gen. Ed. Guiding Principles, Appendix D:

“A general education Speech Communication course improves students' ability of expression both orally and in writing; develops proficiency in listening, critical thinking, and message analysis; fosters creativity through a variety of communication assignments; enhances appreciation and understanding of various forms of expression/communication; and nurtures good citizenship and personal responsibility through the study of communication ethics.”

General education speech communication courses should include at least 80 percent (that is, 12) of the following core components:

1. Communication theory and the communication process
2. The role of personal perception in communication
3. The role of communication in critical thinking and decision making
4. Listening
5. Verbal communication (language)
6. Nonverbal communication
7. Audience analysis and adaptation
8. Situational analysis and adaptation
9. Communication confidence
10. Development and organization of messages
11. Message types (relational, informative, persuasive, etc.)
12. Message expression (choice and effective use of appropriate communication channels and media)
13. Analysis and evaluation of verbal and nonverbal messages
14. The role of research in facilitating informed communication
15. Communication ethics

II. UB Learning Goals related to General Education Speech Communication

The UB Undergraduate Learning Goals include the following outcomes related to the area of speech communication.

1. Communicating effectively in various media
 - b. communicate orally in one-on-one and group settings
2. Developing a knowledge and skills base
 - c. modify one's approach to an issue or problem based on the contexts and requirements of particular situations (adaptability)
5. Maturing in interpersonal behavior and professional conduct
 - b. meet professional standards and competencies
 - d. develop their capacity for leadership
 - e. maintain civility in all interactions with others

III. Learning Outcomes for General Education Speech Communication

Students will be able to:

1. Identify the variables of the communication process;
2. Select appropriate forms of verbal and nonverbal communication and proper channels of communication;
3. Develop and organize focused and coherent messages;
4. Tailor a message to different audiences and situations;
5. Explain and use primary variables that affect oral delivery;
6. Explain strategies for projecting confidence and decreasing anxiety;
7. Identify obstacles to effective listening;
8. Identify, explain, and use rhetorical strategies for informing and persuading;
9. Discuss issues relating to the ethical responsibilities of communicators.

IV. Pedagogy

The following are characteristics of effective teaching of general education speech communication:

1. Instructors should integrate lecture, discussion, and reading assignments with many application exercises.
2. Speech communication principles should grow out of theory but be reinforced with real-world applications, tied whenever possible to students' majors.
3. Instructors should integrate technology into their teaching; students should integrate technology into their presentations.
4. Instructors should work to create a classroom atmosphere which is informal and comfortable and minimizes students' speech anxiety.

5. Student evaluation should include:
 - a. Frequent quizzes or occasional written exams
 - b. Informal and formal presentations
 - c. Written critiques of students' own presentations
 - d. Written critiques of presentations by fellow students or others, inside or out of class.

V. Assessment

One or more of the following procedures could be used to assess the speech communication learning outcomes:

- a. Students will be required to give organized informative and persuasive speeches. The quality of those speeches will be determined by means of a rubric that measures the degree to which the speeches met the learning outcomes numbers 2, 3, 4, 5, and 8. Their improvement throughout an entire semester will measure learning outcome number 6.
- b. Students will write critiques of peers and professional speeches, so that they may practice active listening strategies, as well as identification of variables in the communication process, disfluencies in oral delivery, rhetorical strategies, features of ethical or unethical communication, and the extent to which the message is tailored to the audience(s) and situation. This assessment strategy tests comprehension of learning outcomes 1, 4, 5, 7, 8, and 9.
- c. Students will be given descriptions of a particular audience. Students will present a speech tailored to the demographic, attitudinal, and situational specifics of the audience. The quality of that speech will be determined by means of a rubric that measures the degree to which the speech met the learning outcomes numbers 2, 3, 4, and 5 as stated above.
- d. Speech-grading rubric sheets could be examined and evaluated to assure that they are assessing the learning outcomes numbers 2, 3, 4, 5, and 8.
- e. Students could take communication anxiety surveys at the beginning of the semester, at the end of the semester, and one year after they have completed the course. Lowered communication anxiety would indicate increased confidence in oral communication, a stated goal of the speech communication course under learning objective number 6.
- f. A standardized final written examination could be given at the end of each course, testing comprehension of the non-performance learning outcomes, including numbers 1, 6, 7, and 9.

Assessment strategies a and b will be used every semester. Assessment strategies c, d, e, and f can be used to tease out problems with comprehension of specific learning outcomes, as strategies a and b indicate that there are problems.

Faculty committee developing these guidelines: Kelly Carr, Jonathan Shorr

Date: April 14, 2009

UB Information Literacy Guidelines

I. External Guidelines/Mandates

A. COMAR/MHEC

(Requirements for Public Institutions (13B.06.01.03 L). Retrieved April 8, 2009 from: <http://www.dsd.state.md.us/comar/13b/13b.06.01.03.htm>)

Public institutions may incorporate knowledge and skills involving the use of quantitative data, effective writing, information retrieval, and information literacy when possible in the general education program

B. Middle States Commission on Higher Education

(from Middle States Commission on Higher Education. (2002). Characteristics of Excellence in higher education: Eligibility requirements and standards for accreditation. Philadelphia, PA: MSCHE).

1. Standard 11 Educational Offerings: Fundamental Elements requires:
 - a. Collaboration between professional library staff and faculty in teaching and fostering information literacy skills relevant to the curriculum (p. 35);
 - b. Programs that promote student use of information and learning resources (p. 35).
2. Standard 11 Educational Offerings: Optional Analysis and Evidence suggests:
 - a. Evidence of information literacy incorporated in the curriculum with syllabi, or other material appropriate to the mode of teaching and learning, describing expectations for students' demonstration of information literacy skills (p. 36);
 - b. Assessment of information literacy outcomes, including assessment of related learner abilities (p. 36).

C. Association of College & Research Libraries (ACRL)

(from ACRL. (2000). Information literacy competency standards for higher education. Retrieved April 8, 2009 from <http://www.ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm>)

An information literate individual is able to:

1. Determine the nature and extent of information needed;
2. Access the needed information effectively and efficiently;
3. Evaluate information and its sources critically and incorporate selected information into one's knowledge base;
4. Use information effectively to accomplish a specific purpose; and
5. Understand the economic, legal and social issues surrounding the use of information, and access and use information ethically and legally.

II. UB Learning Goals related to Information Literacy

The UB Undergraduate Learning Goals include the following outcomes related to the area of information literacy.

1. Communicating effectively in various media
 - c. make efficient use of information resources and technology for personal and professional communication
4. Growing in enthusiasm for the pursuit of excellence throughout a lifetime of learning
 - c. make effective use of information resources and technology
6. Thinking critically and creatively, analyzing and synthesizing information to solve problems
 - a. analyze complex issues and make informed decisions
 - b. synthesize information to arrive at reasoned conclusions
 - c. evaluate the logic, validity and relevance of data
 - d. solve challenging problems
 - e. use knowledge and understanding to generate and explore new questions

III. Learning Outcomes for Information Literacy

Upon finishing the course, students will be able to:

1. Articulate a need for information, evaluate the extent of that need, and identify possible sources to meet that need;
2. Select the best method and/or tools to obtain necessary information;
3. Develop effective search strategies and revise the search strategies as needed;
4. Access sources of information and manage the collection of information;
5. Develop and apply criteria in order to evaluate information collected;
6. Integrate key concepts from information collected into existing body of knowledge and apply and present that new knowledge; and
7. Explain and apply ethical, economic and legal guidelines for the use of information.

IV. Pedagogy

1. Information literacy is best introduced within a context of subject research with opportunities for students to identify real information needs.
2. Effective information literacy instruction should involve active student participation and frequent opportunities for application of skills in a subject area.
3. Faculty and students will make effective use of appropriate library resources and publicly available sources.
4. There should be careful selection of a text or selected reading suitable for undergraduates.

V. **Assessment**

Over the course of three years (one-two objectives per semester) all learning objectives can be assessed. Within a given semester one of the following procedures can be used:

1. Sections of various courses identified as fulfilling the information literacy requirement would be randomly sampled; an assignment, a series of test questions or other evaluation relevant to the course would be designed to measure the objective using course embedded assessment; OR
2. All courses identified as fulfilling the information literacy requirement would focus on a selected object; in each section/course an assignment, a series of test questions or other evaluation would be designed to measure the objective; and students' work.
3. Examples of assignments for each objective are:
 - Objective 1: Research proposal, research log, research review, research map;
 - Objective 2: Tool selection and search strategy assignment, test questions, research proposal;
 - Objective 3: Research review;
 - Objective 4: Citation station assignment, annotated bibliography, research paper;
 - Objective 5: Analysis of biased websites; evaluation of sources, annotations, test questions;
 - Objective 6: Evaluations of sources; web resource guide, research proposal; reflective presentation on research/writing process;
 - Objective 7: Identification/resolution of ethical dilemmas, test questions, plagiarism assignment, citation Station assignment, paraphrasing assignment, research paper.

Faculty committee developing these guidelines: Thomas Arendall-Salvetti, Lucy Holman, Catherine Johnson, Michael Shochet

Date: April 14, 2009