

Date: June 3, 2005

To: Dr. David Hopkins, Provost, Wright State University
Dr. Drew Pringle, Faculty President
Dr. G. Thomas Sav, Chair, UCAPC

From: Henry Limouze, Chair, UGEC

Subject: GE Assessment Plan

The University General Education Committee is happy to deliver this completed assessment plan for General Education. There are seven parts to the plan in total, one for each area of General Education except for Area 1. The outcomes and assessment activities required for the two groups of Area 1 courses, mathematics courses and writing courses, diverged enough to require two separate sections.

The plan is the product of much hard work, discussion, reflection, and revision by many faculty over two years. The leadership in writing the sections was taken by GE area "lead faculty" appointed by Vice President Lillie Howard in 2003. The following lead faculty (several of them also members of UGEC) made crucial contributions to this effort by drafting early versions of the area plans and by working with faculty, with UGEC, and with administration to revise, improve, and begin the implementation of the area plans:

Area One	Linda Lester, Mathematics and Statistics Richard Bullock, English
Area Two	Susan Carrafiello, History and University Honors (UGEC member) Mary Ellen Mazey, College of Liberal Arts Kathryn Meyer, History
Area Four	Joe Law, English (UGEC member) Randall Paul, Music
Area Five	Tim Wood, College of Science and Mathematics
Area Six	Sharon Nelson, College of Liberal Arts Valerie Doll, College of Education and Human Services Carol Holdcraft, College of Nursing and Health

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We also wish to recognize several others who contributed enormously to the production, discussion, revision, and refinement of these plans. Vice President Lillie Howard created the lead faculty structure that enabled us to start the drafting process. She attended nearly every UGEC meeting, forced the entire committee to ask probing questions, and supported the committee's investigations of alternative approaches to assessment. UGEC member Evan Osborne (RSCoB) also asked hard questions about how GE areas from different colleges and disciplines could have common themes and goals. At a crucial time in the development of our thinking about an Area 3 plan, he helped lead an Area Three faculty discussion (with support from Dan DeStephen, Director of the Center for Teaching and Learning, and from CTL staff Jim Uphoff and Tina Scarberry). Finally, UGEC members not already mentioned who made vital contributions over the past two years include Jeanne Fraker (UVC), Brian Happy (Student Government), David Reynolds (CECS), Will Mosier (CEHS), Candace Cherrington (CoNH), and Thomas Svobodny, Mindy Diesslin and Dan Ketcha (all CoSM).

The Plans as a Plan

We have developed an assessment plan comprising seven area plans. This approach was necessary for a number of reasons:

- GE learning outcomes are specifically defined for each area
- Most areas are focused on similar disciplines that share many common goals and procedures
- Faculty and administrators working in the disciplines closely aligned to a particular area are best placed to conduct assessment for that area

However, because these seven plans are bound by important centralizing factors, they do not spin off in seven different directions:

- The plans share a common five-part format:
 1. Area learning outcomes
 2. Area performance criteria
 3. Assessment measures
 - Direct
 - Indirect
 - Qualitative
 - Quantitative
 4. Assessment schedule
 5. Data collection, storage, evaluation, and dissemination
- The plans propose important common measures, including essay and portfolio assessment, examination marker questions, student surveys, and focus groups
- All plans have lead-faculty involvement in drafting and initial implementation
- All plans propose workable cyclical patterns for the conduct of particular assessment activities

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- All plans contain specific directions for the regular review and evaluation of assessment data, with the direct involvement of department chairs and college offices and the indirect involvement of UGEC
- All plans include the university-wide GE Student Learning Outcomes Evaluation form, recently revised by UGEC to measure each class's success in meeting area-specific learning outcomes. This form is a crucial common instrument permitting the assessment of the GE program as a whole.

Implementation

As faculty and administrators begin the implementation of this assessment plan, UGEC urges them to view each plan as a guide, not as a straitjacket. These plans will necessarily grow and evolve as faculty make good faith efforts to evaluate student work and student feedback as commentary upon the GE curriculum itself. The goal of assessment is improvement, but the real measure of an assessment plan's success will not be the mere tallying of changes in a course or in a set of requirements; it will be the dialogue among and between faculty and students that can emerge when all participants buy in to the assessment process and begin to take ownership of the curriculum.

Given this goal, UGEC believes it is vital that the lead faculty structure that created the assessment plans be reinvigorated, perhaps reinvented, at the college and department level. Lead faculty should now take over the implementation of the area plans by collaborating with their colleagues to formulate questions, refine the schedule, and work towards the collection and evaluation of assessment data. Each college will approach this problem differently so the committee does not wish to dictate a single structure; but the committee hopes that college deans and chairs will encourage and reward faculty who are motivated to take over such leadership roles.

UGEC's Role

As a standing subcommittee of the University Curriculum and Academic Policies Committee, UGEC will continue to be responsible for oversight of the General Education program. While UGEC is not an assessment implementation committee, it should function as the oversight committee to which assessment reports and proposals for change are sent by the departments, colleges and/or lead faculty.

Furthermore, UGEC will have the important task (likely to come up in late 2006) of revisiting this assessment plan and possibly revising area sections to reflect small changes that will inevitably occur in implementation. If the plan is not simply to sit on a shelf, it should be reviewed regularly and compared to actual practice.

Finally, UGEC's future role will be further to centralize and bind together the area assessment plans by investigating additional general assessment activities. The committee's recent revision of the GE Student Learning Outcomes Evaluation form makes that form an important assessment tool available to all GE areas. In the future,

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the committee should consider conducting a survey of recent graduates (similar to one conducted in 1992-1994) to gauge the effectiveness of general education areas and courses, an assessment instrument that again can provide vital data to all areas of the program. Over time, UGEC should also develop strategies for combining the results of the separate area assessments with university-wide results from the Student Learning Outcomes Evaluation form and other university-wide initiatives (like a survey of graduates). Using these data, UGEC will be uniquely placed to reach conclusions about the effectiveness of the entire General Education program. UGEC should also regularly summarize the data collected and the assessment actions taken and report them to the University Senate and to the Provost and the Council of Deans.

General Education Assessment Plan: Area 1 Mathematics

Lead Faculty: Linda Lester, Department of Mathematics and Statistics

1. The General Education Learning Outcomes for Area One.

- use, formulate and interpret mathematical models
- summarize and justify analyses of mathematical models or problems using appropriate words, symbols, tables and/or graphs

2. Based on these outcomes, the specific performance criteria in this area.

The portion of the final exam we will use as a qualitative measure of student learning outcomes will have 2 or 3 questions and be common to all sections of MTH 145. These questions will represent 15% to 20% of the final. The questions need to be rich enough for us to be able to measure multiple areas of student ability. The word problems will ask students to do the following:

1. Recognize the various elements of a mathematical or statistical model and relate the model to a real-life problem.
2. Apply the algorithm or formula.
3. Interpret the results.
4. Summarize and justify by labeling diagrams or graphs, use mathematical ideas and language in a precise manner, and provide adequate evidence to support conclusions.

Throughout each quarter, students receive practice with 1-4 through their homework, quizzes, classroom activities, and tests.

3. Assessment measures to be used to evaluate student achievement in Area 1.

Direct measures of student achievement

COMMON FINAL EXAM QUESTIONS

Part of the MTH 145 final exam will be common for every student. (The rest of the final exam will be created by the individual instructor teaching the course.) The common portion will contain 1-3 problems that (collectively) are rich enough to allow us to evaluate several aspects of students' learning. Instructors will be provided with a grading rubric to assure consistency in grading. Instructors will also compute a mean and median class score for the common questions and for their course grades. For a random selection of 2 students in each section, instructors will return the entire final along with the students' course grade.

Indirect Measures of student achievement

STUDENT SURVEY

The General Education Student Learning Outcomes Evaluation Form will be distributed on a regular basis to selected Area 1 courses as determined by UGEC. The results will be tabulated and submitted to the dean's office. The results of the survey will be provided to the appropriate committees, chairs, and instructors.

FACULTY FOCUS GROUP

Once per year, GE faculty who have taught MTH 145 (or will teach it soon), will meet to discuss results from assessment. We will use the discussion to improve our teaching, to improve students' learning outcomes, and to encourage faculty to see GE as a priority. A list of Best Practices will be written as a summary.

Qualitative evaluations of student achievement

Every quarter we will randomly select 2 students from each section of MTH 145. For these students we will obtain a copy of their final exam and their course grade. Every 3 years, a committee of MTH 145 faculty will examine this work closely. We have developed a rubric (see Attachments A & B) which will be used for this purpose. One focus is to determine which learning objectives are being met and which are not. Another focus is to determine how closely the grade of the common portion correlates with the grade on the final exam and course grade. The results of the committee's evaluation will be shared with the rest of the MTH 145 faculty and recommendations will be made to rectify any shortcomings found.

Quantitative evaluations of student achievement

Means and medians will be computed on the common final exam page(s) and on the final course grades for each class taught every quarter.

The General Education Student Learning Outcomes Evaluation Form will also provide quantitative data for assessment purposes.

4. Assessment Schedule to be used

Every quarter: Individual MTH 145 faculty will include the common questions on their final exams. They will turn in a copy of the data sheet (See Attachment C) which records information about student results and the complete final for each of their randomly selected students. They will also distribute the GE Student Learning Outcomes Evaluation Form in selected sections. Results will be returned to the college.

Every year: Before the fall quarter begins, MTH 145 Faculty Focus group will meet to discuss results on data sheets and surveys from the previous year. We will add to our Best Practices folder and discuss ways to improve student learning and student perception of the course. During years that we do a qualitative study, we will also discuss those results.

Every 3 years: At the end of spring quarter, an in-depth look at student work and final exams will take place (our quality assessment). (See Attachment for a copy of the rubric used for evaluation)

Note: a pilot of our assessment procedure is currently taking place.

5. Collection, storage, retrieval, evaluation of data

Collected and Stored:

Common final questions and data record sheets will be handed out to MTH 145 instructors at the beginning of the quarter. Each instructor will turn in a clean copy of his final exam along with his data sheets to the MTH 145 course coordinators when the quarter is finished. Instructors will also provide a copy of the final exam of their randomly selected students. These will be stored by the course coordinator until the quality assessment.

The GE Student Learning Outcomes Evaluation Form will be provided to selected sections near the end of the quarter. The results will be returned to the college.

Reviewed and Evaluated:

The data sheets from the final exams will be shared with GE faculty during the pre-fall meeting. We will discuss the outcomes. If the average score for each of the common final exam questions is not at 75% or above, then we will discuss ways to improve scores.

If the results of the GE Student Learning Outcomes Evaluation are not 80% positive, we will discuss the comments of the students. We will need to determine whether it is necessary to adjust either the course, or the ways in which the course can be presented so that students understand the value of the course.

The quality assessment will be done by a selected number of MTH 145 faculty who have taught the course within the past 3 years. Results will be reviewed during the faculty focus group meeting. We will examine our results to see if the GE program objectives of critical thinking, problem solving, and communication skills are being fulfilled as well as our specific Area 1 objectives. The meaning of "fulfilled" is two-fold. By looking at the composition of each instructor's final exam, we expect to know if our course is providing the opportunity to develop the requisite skills. Through looking at

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student work, we expect to discover whether our students are actually achieving at a satisfactory level.

Action

The committee, who does the quality assessment, will also decide what action is necessary if the average score falls below 75%. They will ascertain which are the weak areas and possible improvements as well as soliciting explanations and improvements from the rest of the MTH 145 faculty.

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Attachment A GE- Quality Assessment Rubric MTH 145

Evaluator _____ Student _____

I. Use, Formulate, and Interpret Mathematical Models

A. Recognize the various elements of a mathematical or statistical model and relate the model to a real-life problem.

Does the student show evidence of...

1. choosing the correct algorithm, test, formula, procedure, chart, or graph?
strong somewhat strong somewhat weak weak insufficient evidence

B. Apply the algorithm or formula.

Does the student show evidence of...

1. choosing pertinent information from the problem, table, graph, chart, etc?
strong somewhat strong somewhat weak weak insufficient evidence

2. doing the computations correctly?
strong somewhat strong somewhat weak weak insufficient evidence

C. Interpret or analyze the results.

Does the student show evidence of...

1. providing an explanation that is in alignment with his//her results?
strong somewhat strong somewhat weak weak insufficient evidence

2. providing adequate evidence to support the conclusions?
strong somewhat strong somewhat weak weak insufficient evidence

II Summarize and justify analyses of mathematical models or problems, expressing solutions using an appropriate combination of words, symbols, tables, or graphs.

A. Structure

Does the student show evidence of...

1. clearly stating assumptions and define any variables to be used?
strong somewhat strong somewhat weak weak insufficient evidence

2. clearly labeling diagrams or other visual representations?
strong somewhat strong somewhat weak weak insufficient evidence

B. Content

Does the student show evidence of...

1. using mathematical ideas and language in a precise manner?
strong somewhat strong somewhat weak weak insufficient evidence

2. using good reasoning? Does one step flow well into the next step?
strong somewhat strong somewhat weak weak insufficient evidence

General Education Assessment Plan: Area 1 Writing

Lead Faculty: Richard Bullock, Director of Writing Programs, English

1. The General Education Learning Outcomes for Area One.

- use writing processes to explore, think, and learn, and to write appropriately for various tasks and audience
- develop logical and fair arguments, and observe appropriate writing conventions
- show ability to identify main ideas and evaluate, analyze and synthesize primary and secondary sources

2. Based on these outcomes, the specific performance criteria in this area.

At the end of ENG 102, students will:

- Generate essay topics, research, draft, revise, edit and proofread essays.
- Use the accepted conventions for specific genres, tasks, and audiences.
- Write arguments using sufficient, appropriate information that offers a balanced perspective on the topic.
- Summarize, analyze, and evaluate texts.

The department has identified more specific outcomes for ENG 101 and 102. These are appended.

3. Assessment measures to be used to evaluate student achievement in Area 1.

Direct measures of student achievement

40-50 ENG 102 students' portfolios will be selected randomly and assessed by the Writing Programs Committee for evidence of success in meeting GE learning outcomes. See attached rubric for a description of the outcomes as applied to ENG 101 and 102. The department's desired goal is for all students to meet the outcomes; the assessment will determine areas of relative success and weaknesses in students' ability to meet the outcomes and thus determine program adjustments and faculty development goals to address the issues raised.

Indirect Measures of student achievement

Students who completed ENG 101 and 102 will be surveyed to find out whether they believe that the courses prepared them for writing in their subsequent course work. These surveys may include students who have graduated from the university, students who have entered a major, students who are enrolled in certain Writing Intensive courses, or others. In the years when surveys are chosen as the primary assessment tool, the Writing Programs Committee will

choose a group to survey and develop appropriate questions. The answers to those questions will determine the actions to follow.

The General Education Student Learning Outcomes Evaluation Form will be distributed on a regular basis to selected Area 1 courses as determined by UGEC. The results will be tabulated and submitted to the appropriate dean's office. The results of the survey will be provided to the appropriate college committees, chairs, and instructors.

Qualitative evaluations of student achievement

Each quarter, faculty teaching ENG 102 will read two portfolios randomly chosen from previous quarters' ENG 102 students and meet to discuss the portfolios' merits and problems and the extent to which each meets the program's learning outcomes. Faculty teaching ENG 101 will do the same, with two previous 101 students' portfolios. The discussion that takes place in these meetings will provide the basis for a report outlining faculty perceptions of the success of the program in meeting the outcomes and their perceptions of potential areas of need, along with a plan for addressing those areas.

Quantitative evaluations of student achievement

Each ENG 102 instructor will be paired with another ENG 102 instructor. The instructors will be given lists of 5 randomly-chosen students' names from their section. Those 5 students' portfolios will be assessed by their instructor-partner and then by the instructor of their section. Afterward, each instructor will complete a questionnaire asking them to rate the degree to which the portfolios meet ENG 102 outcomes (see attached rubric) on a 1-5 scale. The results of that assessment (of 20% of the students completing ENG 102—5 students from each section of 25) will be compiled and analyzed by the Writing Programs Committee, which will use the results to develop an action plan.

The General Education Student Learning Outcomes Evaluation Form will also provide quantitative data for assessment purposes.

4. Assessment Schedule to be used

Each year: Measures C and D, focusing on all 3 outcomes and criteria

Every 4 years, alternating every two: Measures A and B, again focusing on all 3

5. Collection, storage, retrieval, evaluation of data

The department's Writing Programs Committee is responsible for ENG 101 and 102. Specifically, the English Department's Bylaws describe the makeup and functions of the committee as follows:

i. Writing Programs Committee

Members:

- The Director of Writing Programs (chair)
- The Director of Graduate Studies (ex-officio voting member)
- The Director of the Writing Center (ex-officio voting member)
- Four faculty elected by the department's voting membership, all of whom should be active in one or more of the department writing programs
- A teaching assistant elected by the teaching assistants in the graduate program

Duties:

- Develop policy, program and course recommendations related to writing courses (except those in creative writing)
- Oversee writing program curricula
- Send undergraduate and general-education related curricular recommendations to the Undergraduate Committee
- Send recommendations involving graduate courses to the Graduate Committee
- Periodically evaluate the performance of Lecturers in composition, and send recommendations regarding the renewal of Lecturers' contracts to the Advisory Committee
- Review all applications for part-time writing positions

The Director of Writing Programs will collect the data from Measures C and D until the Writing Programs Committee reviews and evaluates it and recommends actions based on it.

A member of the Writing Programs Committee, working with the Director of Writing Programs, will collect and store the data from Measures A and B until the Writing Programs Committee reviews and evaluates it and recommends actions based on it.

ENG 101 and 102: General Education Outcomes Evaluation Guide

Overall Writing Ability: Does the student:

- display evidence of writing processes? (invention, drafting, revision)
- use appropriate organizational structures?
- write correctly, with minimal errors?
- argue appropriately?
- write clearly and effectively in general?
- use source material accurately and appropriately? (quotations, paraphrases, summaries)
- cite sources accurately?
- assess his/her own work accurately and fairly?

Academic Language: Does the student:

- define key terms?
- write with precise statements and attention to accurate language?

Other Writers: Does the student:

- consider other writers to be as intelligent as him/herself? (tone and respect)
- present the views of other writers fairly? (balance)
- attribute ideas to their authors?

The Subject: Does the student:

- gather sufficient information on his/her topics?
- use relevant information of quality appropriate to the writing situation?
- provide adequate evidence for his/her assertions?
- use facts accurately?
- avoid blanket generalizations?
- avoid fallacies in his/her arguments? (i.e., misleading or manipulating the reader)
- create coherent texts?

The Reader: Does the student:

- show awareness of a reader for his/her writing?
- assume an open-minded reader?
- use affectively balanced terms (i.e., does not use inflammatory or biased language)?
avoid stereotyping possible readers?

General Education Assessment Plan: Area 2 Cultural-Social Foundations

Lead Faculty: Susan Carrafiello, Mary Ellen Mazey, Kathryn Meyer

1. The General Education Learning Outcomes for Area Two.

- History: describe and analyze historical-social elements of western culture
- The Non-Western World: describe and analyze historical-social elements of nonwestern cultures
- Both History and the Non-Western World: describe and analyze the global interdependence of groups and of individuals

2. Based on these outcomes, the specific performance criteria in this area.

- Questions asking students to recall and identify historical elements of western culture, or, demonstrate ability to recount the “master narrative” of the west.
- Assignments requiring students to synthesize and analyze the meaning and significance of those historical elements, including class and economic systems, political systems, intellectual trends, social trends, role of gender, and the role of the west in the world.
- Paper in which students identify and comprehend the processes of development and governance in nonwestern cultures.
- Essay question in which students are asked to compare and contrast literature in cultures/regions of the nonwestern world.
- Test questions requiring students to discuss the similarities and differences and global interdependence of the western and nonwestern world.

These assignments will be found in exams, papers, and other assignments tailored to test the identified learning outcomes. For example, a typical essay question on an Area 2 History exam might be:

What social, political, and economic factors contributed to the outbreak of the French Revolution in 1789?

An typical essay question on an Area 2, Non-western World, exam might be:

Discuss the choice of Islamic women to wear the yasmak.

The above questions are simply examples of possible marker questions. A committee of faculty who regularly teach these Area 2 courses will develop exam questions that can be given in all sections of a course in a particular quarter.

3. Assessment measures to be used to evaluate student achievement in Area 2.

a) Direct measures of student achievement

For writing intensive courses, portfolios of written work will be collected from sections at random and evaluated to ensure that students in these courses are meeting the learning outcomes of the courses. An evaluation rubric will address all learning outcomes as well as the quality of the writing.

For non-writing intensive courses, marker questions will be developed by faculty in each subject area to address all outcomes. Responses on examinations will be collected from sections of these courses chosen at random. These exams will be evaluated to ensure that students in these courses are meeting the learning outcomes of the courses.

b) Indirect measures of student achievement

The General Education Student Learning Outcomes Evaluation Form will be distributed on a regular basis to selected Area 2 courses as determined by UGEC. The results will be tabulated and submitted to the appropriate dean's office. The results of the survey will be provided to the appropriate college committees, chairs, and instructors.

Student and faculty focus groups will meet on a regular schedule to evaluate and discuss particular courses in Area 2.

c) Qualitative evaluations of student achievement

Portfolio evaluations and evaluations of essay questions will be conducted as described above. Focus groups will also give us important qualitative information.

d) Quantitative evaluations of student achievement

Data gathered from surveys and tabulation of marker questions will be compared from year to year to look for trends and identify areas in need of particular attention.

The General Education Student Learning Outcomes Evaluation Form will also provide quantitative data for assessment purposes.

4. Assessment Schedule to be used

Area 2 will assess courses on the following three-year rotation. Each activity described below addresses all learning outcomes for this area; thus at the end of a cycle each outcome would have been evaluated with three measures.

- Year 1—Development or review of objective and essay marker questions for non-WI classes, including the HST and CLS sections. Review of survey and focus group information collected previously. Development of appropriate evaluation rubrics.
- Year 2—Examination of objective and essay marker questions from HST and CLS, and non-WI sections; preparation for portfolio review.
- Year 3—Examination of portfolios from all WI courses in Area 2, including RST and CST courses; focus groups formed to evaluate courses.

5. Collection, storage, retrieval, evaluation of data

Marker questions and evaluation rubrics will be developed by an assessment committee made up of faculty regularly teaching Area 2 courses. Every course should be represented by at least one faculty member. The committee will be chaired on a rotating basis by one of the Area 2 department chairs, who will ensure that the committee is active in the appropriate year and that it reports its findings and subsequent activities based on those findings. Criteria for success will be developed by faculty in each subject matter area, then posted on the Area 2 website and distributed to faculty teaching those courses.

Results will be distributed to all Area 2 faculty involved, to the chairs of all Area 2 departments, and to the deans of CoLA and RSCoB. Department chairs and the Deans' offices will make sure all results and recommendations are acted upon by the appropriate department and college curriculum committees.

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General Education Assessment Plan: Area 3 Human Behavior

Lead Faculty: Area Three Department Chairs

1. The General Education Learning Outcomes for Area Three.

At the completion of the Wright State University General Education Program a student will be able to do the following:

- a. use multiple approaches/perspectives to systematically analyze complex individual and institutional behavior culturally, subculturally, and/or cross-culturally
- b. recognize appropriate ethical uses of social scientific knowledge

2. Based on these outcomes, the specific performance criteria in this area.

In essays or essay answers on exams students will *successfully**

- describe an aspect of individual or institutional behavior
- link individual or institutional behavior to society, politics, economics, psychology, or other appropriate contexts
- analyze individual or institutional behavior culturally, subculturally, and/or cross-culturally
- identify and discuss ethical uses and issues relating to social scientific knowledge

**Criteria for success will be developed by faculty in each subject matter area, then posted on the Area 3 website and distributed to faculty teaching those courses. See Item 5 below.*

Students will correctly answer marker questions** on exams indicating that they can do some or all of the following, as appropriate to the class:

- identify an important aspect of individual behavior
- identify an important aspect of institutional behavior
- recognize the uniquely social context and importance of human behavior
- recognize the uniquely economic context of human behavior
- recognize the uniquely political context of human behavior
- recognize the uniquely psychological context of human behavior

***These marker questions may appear on essay exams as well as on other types of exams. A committee of faculty who regularly teach these courses will develop exam questions that can be given in all sections of a course in a particular quarter. Criteria for success will be developed by faculty in each subject matter area, then posted on the Area 3 website and distributed to faculty teaching those courses. See Item 5 below.*

3. Assessment measures to be used to evaluate student achievement in Area 3.

Direct measures of student achievement

For writing intensive courses, portfolios of written work will be collected from sections at random and evaluated to ensure that students in these courses are meeting the learning outcomes of the courses. An evaluation rubric will address all learning outcomes as well as the quality of the writing.

For non-writing intensive courses, marker questions will be developed by faculty in each subject area to address all outcomes. Responses on examinations will be collected from sections of these courses chosen at random. These exams will be evaluated to ensure that students in these courses are meeting the learning outcomes of the courses.

Indirect measures of student achievement

The General Education Student Learning Outcomes Evaluation Form will be distributed on a regular basis to selected Area 3 courses as determined by UGEC. The results will be tabulated and submitted to the appropriate dean's office. The results of the survey will be provided to the appropriate college committees, chairs, and instructors.

Qualitative evaluations of student achievement

Portfolio evaluations and evaluations of essay questions will be conducted as described above. Focus groups will also give us important qualitative information.

Quantitative evaluations of student achievement

Data gathered from surveys and tabulation of marker questions will be compared from year to year to look for trends and identify areas in need of particular attention.

The General Education Student Learning Outcomes Evaluation Form will also provide quantitative data for assessment purposes.

4. Assessment Schedule to be used

Area 3 will assess courses on the following three-year rotation. Each activity described below addresses all learning outcomes for this area; thus at the end of a cycle each outcome would have been evaluated with three measures.

- Year 1—Development or review of “criteria for success” for evaluation of assessment materials coming from each course. Development or review of

marker and essay questions for non-WI classes, including PLS, PSY, and certain EC courses. Review of survey and focus group information collected previously.

- Year 2—Examination of marker and essay questions from PLS, PSY 105, and non-WI sections of EC 200; preparation for portfolio review.
- Year 3—Examination of portfolios from all WI courses in Area III, including SOC, WMS, and WI sections of EC 200; focus groups formed to evaluate courses.

5. Collection, storage, retrieval, evaluation of data

Marker questions, evaluation rubrics, and “criteria for success” will be developed by an assessment committee made up of faculty regularly teaching Area 3 courses. Every course should be represented by at least one faculty member. The committee will be chaired on a rotating basis by one of the Area 3 department chairs, who will ensure that the committee is active in the appropriate year and that it reports its findings and subsequent activities based on those findings.

Results will be distributed to all Area 3 faculty involved, to the chairs of all Area 3 departments, and to the deans of CoLA, CoSM, and RSCoB. Department chairs and the Deans’ offices will make sure all results and recommendations are acted upon by department and college curriculum committees.

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General Education Assessment Plan: Area 4 Human Expression

Lead Faculty: Joe Law and Randall Paul

1. The General Education Learning Outcomes for Area Four.

- a. Students will recognize and critically discuss significant creative, philosophical and religious works
- b. Students will understand the complex blend of personal vision, social-cultural background, ethical values and aesthetic judgment in such works
- c. Students will discuss the diverse means of communication in such works

2. Based on these outcomes, the specific performance criteria in this area.

In essays or essay answers on exams students will *successfully**

- address a significant aspect of a creative, philosophical, or religious work.
- relate an artistic, philosophical, or religious work to its social-cultural background.
- relate an artistic, philosophical, or religious work to the personal vision of the artist, writer, philosopher, or religious thinker.
- relate an artistic, philosophical, or religious work to the ethical values of the individual creator, of the period in which it was created, and/or of today.
- relate an artistic, philosophical, or religious work to the personal aesthetics of its creator, the aesthetics of its time, and/or the aesthetics of today.
- analyze the formal means of communication used in a work of literature, a philosophical work, a religious work, a play, a work of art, or a work of music.

**Criteria for success will be developed by faculty in each subject matter area, then posted on the Area 4 website and distributed to faculty teaching those courses. See Item 5 below.*

Students will correctly answer marker questions** on exams indicating that they can

- identify a particular work of music or art
- articulate the criteria by which a particular medium and/or style is evaluated
- identify the cultural period of an artist, musician, or playwright
- identify the cultural period to which a work of art, music, or literature belongs and relate specific aspects of that work to its cultural period.

***These marker questions may appear on essay exams as well as on other types of exams. A committee of faculty who regularly teach these courses will develop exam questions that can be given in all sections of a course in a particular quarter. Criteria for success will be developed by faculty in each subject matter area, then posted on the Area 4 website and distributed to faculty teaching those courses. See Item 5 below.*

3. Assessment measures to be used to evaluate student achievement in Area 4.

Direct measures of student achievement

For writing intensive courses, portfolios of written work will be collected from sections at random and evaluated to ensure that students in these courses are meeting the learning outcomes of the courses. An evaluation rubric will address all three learning outcomes as well as the quality of the writing.

For non-writing intensive courses, marker questions will be developed by faculty in each subject area to address all three outcomes. Responses to essay questions on midterm and final examinations will be collected and copied from sections of these courses chosen at random. These exams will be evaluated to ensure that students in these courses are meeting the learning outcomes of the courses. Responses to other types of marker questions will be tabulated.

Indirect measures of student achievement

Student and faculty focus groups will meet on a regular schedule to evaluate and discuss particular courses in Area 4.

The General Education Student Learning Outcomes Evaluation Form will be distributed on a regular basis to selected Area 4 courses as determined by UGEC. The results will be tabulated and submitted to the appropriate dean's office. The results of the survey will be provided to the appropriate college committees, chairs, and instructors.

Qualitative evaluations of student achievement

Portfolio evaluations and evaluations of essay questions will be conducted as described above. Focus groups will also give us important qualitative information.

Quantitative evaluations of student achievement

Data gathered from surveys and tabulation of marker questions will be compared from year to year to look for trends and identify particular areas in need of particular attention.

The General Education Student Learning Outcomes Evaluation Form will also provide quantitative data for assessment purposes.

4. Assessment Schedule to be used

Area 4 will assess courses on the following three-year rotation. Each activity described below addresses all three learning outcomes for this area; thus at the end of a cycle each outcome would have been evaluated with three measures.

- Year 1—Development or review of “criteria for success” for evaluation of assessment materials coming from each course. Development or review of marker and essay questions for ART/MUS/TH/MP courses. Review of survey and focus group information collected previously.
- Year 2—Examination of marker and essay questions from ART 214, TH 214, MP 131, and MUS 214; preparation for portfolio review.
- Year 3—Examination of portfolios from all WI courses in Area 4 (Great Books courses and MUS 290); focus groups formed to evaluate courses.

5. Collection, storage, retrieval, evaluation of data

Marker questions, evaluation rubrics, and “criteria for success” will be developed by an assessment committee made up of faculty regularly teaching Area 4 courses. Every course (ART 214, CLS 204, ENG 204, MP 131, MUS 214, MUS 290, PHL 204, REL 204, and TH 214) should be represented by at least one faculty member. The

committee will be chaired by one of the Area 4 department chairs on a rotating basis, who will ensure that the committee is active in the appropriate year and that it reports its findings and subsequent activities based on those findings.

Results will be distributed to all Area 4 faculty involved, to the chairs of all Area 4 departments, and to the CoLA Dean. Department chairs and the Dean's office will make sure all results and recommendations are acted upon by department and college curriculum committees.

General Education Assessment Plan: Area 5 Natural Sciences

Lead Faculty: Tim Wood

1. The General Education Learning Outcomes for Area Five:

- a) Understand the experimental basis of scientific inquiry
- b) Understand the importance of model building for understanding the natural world
- c) Understand the theoretical, practical, creative and cultural dimensions of scientific inquiry
- d) Discuss some of the fundamental theories underlying modern science
- e) Understand the dynamic interaction between society and the scientific enterprise
- f) Recognize appropriate ethical uses of knowledge in the natural sciences.

2. Based on these outcomes, the specific performance criteria in this area.

Performance criteria in all courses include

- Written laboratory reports
- At least three written examinations
- Standard, course-specific questionnaire administered with final exams (see below)

Each of these criteria emphasizes critical thinking skills, a sound understanding of scientific principles and procedures, recognizing the dynamic role of science in society.

In addition, many courses also use one or more of the following performance criteria, which cover similar ground but can often do so more effectively than lab reports and large exams:

- Written quizzes administered weekly
- Writing assignments, especially in writing intensive courses
- Independent inquiry assignments, combining writing with library research or special data gathering beyond the regular laboratory or field exercise
- Group discussion of assigned topics, especially using facilities of WebCT

The choice of these performance criteria will depend largely on the class size, structure, and the preferences of the instructor.

3. Assessment measures to be used to evaluate student achievement in Area 5.

Direct measures of student achievement

Course-specific questionnaire. We will use a standard set of questions, specific to each course, to measure student understanding of important scientific principles. These will be integrated into the final exam each time the course is taught. The questions will be initially assembled by the main course instructor with input from the Area 5 Coordinator. The Coordinator will also have responsibility for

- a. reminding instructors to insert the standard questions
- b. collecting and tallying student responses

- c. archiving and disseminating results from each Area 5 General Education course

Examples of questions from BIO 107 (Biology of Disease) are shown in Appendix 1.

Indirect measures of student achievement

Focus groups. This assessment will be done through focus group sessions conducted independently with help from the College of Business. Questions are to be discussed and approved by course instructors. We anticipate each year at least one group for students prior to taking any GE science courses, and another for students having completed the entire science requirement at Wright State University. Each focus group will involve 6-10 students, one facilitator to lead the discussion, and one co-facilitator to take notes. Sessions will run for about 90 minutes, and refreshments will be provided. Questions will focus on the participants'

- Experience with science before entering Wright State;
- Current attitudes towards science;
- Expectations (or assessment) of their General Education science courses;
- Expectations (or assessment) of the General Education Program.

The General Education Student Learning Outcomes Evaluation Form will be distributed on a regular basis to selected Area 5 courses as determined by UGEC. The results will be tabulated and submitted to the CoSM office. The results of the survey will be provided to Area 5 lead faculty and to department chairs..

Qualitative evaluations of student achievement

NOS Questionnaire. For this year we will experiment with the questionnaire on AViews of Nature of Science,@(Lederman, Norm G., Fouad Abd-El-Khalick, Randy L. Bell, Renée S. Schwartz. 2002. Views of nature of science questionnaire: towards valid and meaningful assessment of learners=conceptions of nature of science. Journal of Research in Science Teaching 39(6): 497-521). Administration of the test appears fairly straightforward, but evaluation may be difficult. The questionnaire requires written responses to six probing questions, to be followed by a personal interview to establish clarity. Responses are then evaluated according to a prescribed matrix. Initial analysis will be conducted by the Area 5 Coordinator, but eventually we expect to hire a graduate student in education for much of this work. The test will be given in Spring Quarter, 2005 to students enrolled in their third and final GE science course.

Focus groups. See 3. b) above.

Quantitative evaluations of student achievement

General questionnaire. A separate set of questions will be used to assess the effectiveness of other Area 5 learning objectives. This questionnaire will be administered online using WebCT. Certain incentives, such as a drawing for WSU Bookstore Gift Certificates, will be used to encourage students to access the

questionnaire. The questionnaire will be offered twice each academic year: once to students in the first two weeks of their first GE science course, and again to students in the final two weeks of their last GE science course. Fifteen multiple choice and short answer questions will address those learning objectives not covered by the Course-Specific Questionnaire. Examples of questions are shown in Appendix 2.

Course-specific questionnaire. See 3. a) above.

The General Education Student Learning Outcomes Evaluation Form will also provide quantitative data for assessment purposes.

4. Assessment Schedule to be used

For the next several years we will attempt to implement *all* of the assessment measures every year. One of our aims will be find the most effective and efficient way to collect the data.

5. Collection, storage, retrieval, evaluation of data

Taking responsibility. Responsibility for Area 5 assessment will be assumed by the Area 5 Coordinator working closely with course instructors. Compilation and statistical analysis may eventually be done with the assistance of student workers. In the case of the Lederman interviews, for example, we expect to hire a graduate student in science education. Results will be disseminated to all Area 5 course instructors in our regular quarterly meetings, where we will discuss their implications; results will also be passed to the University General Education Committee.

Assessing the assessment: For assessment purposes we recognize the need to establish a credible base of longitudinal data. At the same time, we anticipate the need to adjust and modify parts of our assessment tools as the results are analyzed. New questions will certainly be added while others are discarded.

Measuring success. For the course specific questions, an achievement rate of 75% correct answers will be considered satisfactory. However, all the other assessment tools will be comparing the performance and attitudes of incoming and outgoing students. We will be looking for indications of change: in attitudes, perspectives, and knowledge. Statistically significant increases in scores on the NOS Questionnaire and General Questionnaire will be interpreted as program success, and we would strive to maximize these increases. Results from the focus groups should help us clarify these results and confirm their validity. It must be recognized, however, that differences between incoming and outgoing scores may be modified by influences beyond the reach of Area 5 courses.

Results that show little or no positive difference between incoming and outgoing students' improvement will prompt a closer examination of the program. For example, it should be possible to distinguish results from specific courses to identify those that are

achieving better than others. Corrective measures could then be applied from various levels.

*

Area 5: Appendix 1

Examples of standard questions from BIO 107 (Biology of Disease) inserted into the final exam for a longitudinal assessment of student understanding of major concepts:

1. What big idea from Louis Pasteur helped Robert Lister understand the cause of infection?
 - A. Anthrax bacteria can be weakened by partial drying.
 - B. Invisible particles in the air can contaminate grape juice and make it ferment.
 - C. Rabies is caused by an unseen virus in the saliva of its victims.
 - D. Carbohic acid can be used to sterilize surgical tools. .
2. Canning food to preserve it works on the assumption that
 - A. all bacteria are killed by high, moist heat and pressure.
 - B. no bacteria can grow without oxygen.
 - C. no bacteria can grow without water.
 - D. the tin lining of a can retards bacterial growth.
3. Every day you inhale virus pathogens capable of causing a bad cold. Where do these viruses come from?
 - A) They develop from tiny, resistant spores.
 - B) They split off from parent pathogens.
 - C) They are produced by human cells.
 - D) They form from airborne dust.
4. There is great concern about widespread, arbitrary use of antibiotics because
 - A) it causes allergies against these antibiotics.
 - B) it leads to bacterial resistance against these antibiotics.
 - C) it creates an artificial scarcity in these antibiotics.
 - D) there may be many unknown side effects.
5. While vacationing in Belize a married couple is exposed to dengue fever virus. For the man it is his second exposure in five years; for the woman it is her first encounter with the virus. Which one is likely to respond with the most antibodies? Explain your answer.

*

Area 5: Appendix 2

Examples of standard questions on the General Questionnaire offered to students in all Area 5 General Education courses:

1. Which of these would be an example of scientific modeling?
 - A. Visualizing an atom as a miniature solar system
 - B. Proposing that contagious diseases are caused by tiny viruses and bacteria.
 - C. Interpreting fossils as representations of ancient living things

2. Which one of these questions cannot be addressed by scientific means?
 - A. How much plutonium is needed to make a 20 megaton bomb?
 - B. How does the smallpox virus avoid human immune defense mechanisms?
 - C. Is it justified to kill 200 innocent people if that action might prevent even more killings?
 - D. What would be a suitable addictive substance to replace caffeine in soft drinks?

3. Scientific theories sometimes challenge certain beliefs held strongly by society. Describe below an example of this conflict, either current or historical.

4. "Clinical trials show that when used with proper diet and exercise, Fat-B-Gone tablets can help you lose up to 2-3 pounds per week." In one or two sentences below explain why this is NOT a scientific endorsement of the tablets.

5. "Scientists are just as sensitive to ethical values as is the rest of society." Do you agree?
 - A. Yes.
 - B. No.

General Education Assessment Plan: Area 6 College Component

Lead Faculty: College Associate Deans

1. The General Education Learning Outcomes for Area Six.

Area 6 requirements link general education more closely with study in the major, thereby making more apparent the applicability and transferability of general competencies to specialized study.

A student completing an Area 6 class will be able to do the following:

- a. communicate with individuals who are in the student's major, in allied fields, and non-specialists
- b. understand important relationships and interdependencies between the student's major and other academic disciplines, world events or life endeavors

OR

- c. additionally meet the objectives of Area I, II, III, IV, or V.

2. Based on these outcomes, the specific performance criteria in this area.

- a. Discussion of trends, issues, and other major content with supportive evidence (e.g., marker and essay questions on appropriate examinations)
- b. Identification of similarities, influences, or other important relationships between students' major and related academic disciplines, world events or life endeavors (e.g., marker and essay questions on appropriate examinations)

OR

- c. Assessment plans for corresponding Areas I, II, III, IV, or V (e.g., may include critical thinking, problem solving, communication skills, historical perspective, and the like.)

3. Assessment measures to be used to evaluate student achievement in Area 6.

a. Direct measures of student achievement

- 1.) Marker questions
- 2.) Essay questions

Faculty teaching courses in Area 6 will be invited by the dean's office to create and review a list of marker and essay questions that reflect the performance criteria for Area 6. To ensure that performance criteria will be addressed, these questions will be submitted to the appropriate college committee for review and suggestions.

From this list, each faculty teaching an Area 6 class will select a marker question(s) and/or an essay question(s) related to the selected Learning Objective(s) for Area 6. The selected questions will be included on an appropriate examination and evaluated by the faculty member.

Each quarter Area 6 instructors will complete the "General Education Course Report," indicating the question(s) posed, the percentage of students who responded correctly to marker questions or adequately to essay questions, what conclusions can be drawn from the results, and what changes if any are planned for future classes. (See attached form). The forms will then be forwarded to the dean's office, with a copy to the department chair, for review by the appropriate college committee.

b. Indirect Measures of student achievement

The General Education Student Learning Outcomes Evaluation Form will be distributed on a regular basis to selected Area 6 courses as determined by UGEC. The results will be tabulated and submitted to the appropriate dean's office. The results of the survey will be provided to the appropriate college committees, chairs, and instructors.

c. Qualitative Evaluations of student achievement

Qualitative evaluation of student achievement will be conducted by evaluating data collected from marker questions and essay questions. The information will be reviewed by the appropriate college committee.

d. Quantitative evaluations of student achievement

Quantitative evaluation of student achievement will be conducted by analyzing data collected from marker questions and from the GE Student Learning Outcomes Evaluation Form. The information will be reviewed by the appropriate college committee.

4. Assessment Schedule to be used

During fall, winter, and spring quarters, faculty teaching General Education courses in Area 6 will administer at least one General Education marker question and/or essay in the appropriate examination, as well as the GE Student Learning Outcomes Evaluation Form as scheduled. Hence, the two outcomes and two assessment measures for each outcome will be assessed regularly.

5. Collection, storage, retrieval, evaluation of data

a. During fall, winter, and spring quarters, each faculty teaching a GE course in Area 6 will administer at least one related General Education marker question and/or essay, as

well as the GE Student Learning Outcomes Evaluation Form as scheduled. The exam results will be recorded on the General Education Area 6 Course Report form (attached) and submitted to the dean's office and the appropriate college committee, with a copy to the department chair, for review and recommendations. The recommendations, if any, will be noted and forwarded to the department chair and instructor.

b. Data for each class will be stored in the dean's office and reviewed quarterly and annually (longitudinally) with recommendations made as needed to the appropriate college committee.

c. The goal for assessment of marker questions and/or essay questions should be that 100% of students demonstrate competency. An 80% competency rate will be considered acceptable. For courses with aggregate percentages below this goal, the appropriate college committee will evaluate the college's delivery of the course.

Because of the breadth of Area 6, this plan will serve as a pilot with revisions to be recommended when needed.

**WSU General Education
DRAFT--COURSE REPORT Area 6--DRAFT**

1. Quarter_____ Year_____
2. GE Area_____ Course Prefix_____ Number_____ Section_____
3. Instructor's Name_____
4. Writing Across the Curriculum Grades
_____N/A _____Number Passing _____Number Not Passing

GE Area 6 Learning Objectives are to:

- a. communicate with individuals who are in the student's major, in allied fields, and non-specialists;**
- b. understand important relationships and interdependencies between the student's major and other academic disciplines, world events or life endeavors;**
- c. or meet the objectives of Area I, II, III, IV, or V.**

5. State the marker questions, essay questions, and/or paper assignments used to assess one or more of the above Learning Objectives.

- a. _____Letter(s) of related Learning Objective(s) selected
- b. Related Assessment:

6. What were the results of the assessment?

- a. _____Class Enrollment
- b. _____% of correct answers on marker questions
- c. _____ % of adequate responses to essay question/paper assignment

7. What conclusions did you draw from the above results?

8. Recommendations (if any)

Signature of Course Faculty
Please return form to the office of the Dean

Date