

General Education Competencies

Emory identifies college-level general education competencies and the extent to which students have attained them as part of periodic student learning outcomes assessment processes.

Emory has two colleges and three schools with undergraduate degree programs. Emory College of Arts and Sciences and Oxford College admit students as first-year students who must complete general education requirements; the business, medical, and nursing schools admit transfer students who must complete general education requirements prior to admission.

The general education requirements of the two colleges and the general education prerequisites of the three schools differ slightly; however, all of the colleges and schools have agreed on five general education competencies that undergraduate students must attain.

General Education Area/Competency	Learning Outcomes	How is this competency addressed in undergraduate curricula?
<p>Writing and Communication</p> <p>This competency includes courses that focus on writing and other forms of communication.</p>	<p>Upon completing the Writing and Communication General Education requirements, students will be able to:</p> <ul style="list-style-type: none"> • construct a thesis and support it in an original essay that demonstrates competencies in grammar, coherence, and content • develop an argument supported with secondary sources and following a specified style of documentation 	<p>All undergraduates are required to complete a first-year composition requirement. In addition, all schools require at least three courses in the disciplines with significant writing or other communications components.</p> <p>For General Education Requirements and Course Descriptions, please click on the links provided below.</p>
<p style="text-align: center;">General Education Requirements and Course Descriptions:</p> <p>[1] http://catalog.college.emory.edu/academic/ger/ [2] http://oxford.emory.edu/academics/divisions-degrees/general-education-requirements/ [3] http://oxford.emory.edu/academics/divisions-degrees/distribution-requirements/</p>		

<p>Mathematics and Quantitative Reasoning</p> <p>This competency includes courses that expand a student's understanding of quantitative modes of analysis such as mathematics, computer science, and quantitative social statistics and methods.</p>	<p>Upon completing the Mathematics and Quantitative Reasoning General Education requirements, students will be able to use problem solving, critical thinking, and quantitative skills to address questions relevant to their discipline</p>	<p>All undergraduates are required to complete at least one course.</p> <p>General Education Requirements and Course Descriptions [1] [2] [3]</p>
<p>Natural Sciences</p> <p>This competency includes courses that demonstrate fundamental principles and techniques of scientific inquiry as a means of understanding the natural world and human life; courses focusing on scientific findings and concepts; and courses focusing on scientific methodology.</p>	<p>Upon completing the Natural Sciences General Education requirements, students will be able to:</p> <ul style="list-style-type: none"> • analyze data, develop hypotheses, and design experiments to address scientific questions • use problem solving, critical thinking, and quantitative skills to address scientific questions • communicate scientific information orally and in writing 	<p>All undergraduates complete at least two courses, including at least one with a laboratory component.</p> <p>General Education Requirements and Course Descriptions [1] [2] [3]</p>
<p>Social Sciences</p> <p>This competency includes courses that focus on individuals and/or groups in society, demonstrate how the social sciences use theory and methods to expand our understanding of social phenomena, or examine historical forces, cultural traditions, and human values.</p>	<p>Upon completing the History, Society, and Cultures General Education requirements, students will be able to:</p> <ul style="list-style-type: none"> • demonstrate an ability to analyze a written historical, social, or cultural argument • demonstrate an ability to build an argument in well-crafted prose in the relevant course discipline 	<p>All undergraduate schools require a minimum of two courses in the social sciences.</p> <p>General Education Requirements and Course Descriptions [1] [2] [3]</p>

	<ul style="list-style-type: none"> • demonstrate understanding of the role of individuals and groups in society, the use of social science theory and methods in understanding social phenomena, and/or the role of cultural traditions, historical forces, and human values in societies 	
<p>Humanities</p> <p>This competency includes courses that reflect on human experience and the human condition through texts or artistic forms, in performance of art, dance, music, or theater, and in related interdisciplinary humanities courses.</p>	<p>Upon completing the Humanities, Arts, Performance, and Language General Education requirements, students will be able to:</p> <ul style="list-style-type: none"> • use critical thinking to analyze, evaluate, and interpret texts that reflect upon human experience, the human condition, or artistic form • express their ideas orally, visually, in writing, in performance, or in other media • demonstrate advanced beginner competency in reading, writing, speaking, and listening in a foreign language 	<p>All undergraduate schools require at least two courses in the humanities. In Emory College of Arts and Sciences, four courses are required, of which two must be language courses. Students must take at least one humanities course which is not a language course or is a language course above the elementary level.</p> <p>General Education Requirements and Course Descriptions [1] [2] [3]</p>

Assessment of General Education Competencies

Faculty members of Emory College and Oxford College periodically assess general education competencies. This work is coordinated by the Emory College Educational Policy Committee and Oxford College's Educational Programs Inquiry Committee. At the institutional level, general education assessment procedures and results are reviewed by the University Learning Outcomes Assessment Committee.

In addition to collaborating on college-level general education assessment projects, faculty members assess general education competencies as part of degree-level outcomes assessment.

Emory has assessed the writing and communication competency for the past three years; assessments for the four other general education competencies were completed this year. Results are summarized below in seven report templates – three for writing and communication and one for each of the other four competencies.

Attainment of General Education Competencies

I. Competency: Writing and Communication
College: Emory College of Arts and Sciences
Period of Analysis: Spring 2010

<p>Means of Assessment</p>	<p>A random sample of 60 courses taught during Spring 2010 was selected from a total of 167 courses that satisfy the continuing writing requirement. The Office of Institutional Research set up a Blackboard site where students in the selected courses could submit a copy of their assignments. Students were asked to submit a copy of an early writing assignment in the course and a copy of the final paper they prepared for the course (see instructions in Appendix A). Students' names were removed from the papers and each paper was given a tracking number. In total, 50 students from 19 sections submitted both first and second writing assignments. One hundred papers were evaluated (two for each student).</p>
<p>Criteria for success</p>	<p>A writing assessment rubric was used to assess student success. It included seven categories: Thesis, Overall Organization, Paragraph Structure, Use of Evidence, Style, Grammar and Mechanics, and Holistic Score. The committee looked for statistically significant gains in all areas from the first to second paper, and for the majority of student papers to be evaluated as good or outstanding.</p> <p>In addition to the direct assessment of sample writings, the Office of Institutional Research organized two focus groups with instructors who teach WRT courses.</p>
<p>Justification for chosen criteria</p>	<p>The rubric was developed by the Writing Center director, Dr. Deborah Ayer, and four graduate fellows in the Writing Center based on the learning goals for these courses and their experiences working with students on writing.</p>
<p>Findings</p>	<p>Overall, the findings from the direct assessment revealed that grammar and mechanics and use of evidence were the strongest areas while developing a thesis was the weakest in the sample of papers reviewed. Over the course of the semester, however, the largest gain was in the area of thesis development. The improvement from first to last assignment was statistically significant for all areas, except grammar and mechanics. By the end of the semester, the average paper was</p>

	<p>rated at the midpoint between “satisfactory” and “good” on all seven criteria. Table 1 shows the results of paired t-tests for each of the seven areas of evaluation.</p>
<p>Analysis of the extent of attainment</p>	<p>Most students were ranked as good or outstanding all areas. Grammar and mechanics was an area in which students did not make statistically significant gains between the first and second papers. While student writing was rated as mostly good or outstanding in the analysis, the focus group identified areas in which students need to improve, notably in the use of evidence and the grammar/mechanics of writing.</p>
<p>Actions taken as a result of the assessment</p>	<p>In 2010-11 and 2011-12, the Writing Center director met with groups of faculty to talk about approaches to teaching writing and designing assignments to elicit the best student responses. This included a series of large lunch groups focusing on writing in general, and smaller groups in the humanities and the languages which met several times over the course of a year. Approximately 50 faculty members participated in one or more of these conversations, one set of which involved the use of rubrics for grading to help students understand components of evaluation. Others focused on best practices and successful techniques. This action grew out of the focus groups and the need to offer more support to instructors.</p> <p>Emory College of Arts and Sciences hired a director of College Writing charged with developing a more comprehensive program in writing, starting with the first-year composition courses and then the continuing writing courses.</p>

II. Competency: Writing and Communication
College: Emory College of Arts and Sciences
Period of Analysis: Spring 2010

<p>Means of Assessment</p>	<p>During spring semester 2010 students in ENG 101: Expository Writing were invited to participate in an assessment project conducted by the Emory College Writing Center (EWC), which coordinated the collection and analysis of papers. The process was as follows:</p> <ol style="list-style-type: none"> 1. each participating student brought a draft of the designated essay to their EWC conference 2. the student then revised the essay as many times as he or she wanted, scheduling more conferences at EWC or consulting with their instructor 3. the instructor collected the final draft of the essay along with the
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	<p>first draft containing the tutor's comments and sent these to the Writing Center.</p> <p>EWC staff convened a group of graduate fellows and faculty to read the before and after essays and used a writing rubric to assess them. Forty-six students were randomly selected from among the 196 enrolled in ENG 101. Each essay was evaluated by at least two readers.</p>
Criteria for success	<p>The assessors hoped to find improvement in all areas between the first draft and final paper. The rubric looked at seven areas: Thesis, Overall Organization, Paragraph Structure, Use of Evidence, Style, Grammar and Mechanics, and Holistic Score (reader enjoyment). The readers hoped to find that 75% or more achieved "satisfactory" or better ratings in each category.</p>
Justification for chosen criteria	<p>The rubric was developed by the Writing Center director, Dr. Deborah Ayer, and graduate fellows in the Writing Center based on the learning goals for these courses and their experiences working with students on writing.</p>
Findings	<p>The students gained in all areas between the first draft and final draft. Their writing improved most in organization, structure, and grammar, and least in thesis development and reader enjoyment. See data in ENG 101 Frequencies and ENG 101 Assessment Data.</p>
Analysis of the extent of attainment	<p>Averaging the two readers' scores for each student, the two areas in which 75 percent of students did not achieve a satisfactory rating by the final draft were thesis development and structure. In all other areas, most students achieved a satisfactory rating.</p>
Actions taken as a result of the assessment	<p>Though Emory's students achieved mostly satisfactory ratings in this assessment, discussions about the assessment made clear that the first-year composition program needed support. Instructors for these courses are primarily graduate students, and the absence of a director means that we did not have an effective way to put in place changes to the composition program in all sections.</p> <p>In fall 2012 Emory College of Arts and Sciences hired a director of College Writing charged with developing a more comprehensive program in writing, starting with the first-year composition courses and then the continuing writing courses. The director of first-year composition will set shared learning goals, monitor the implementation of those goals in first-year composition courses, and evaluate whether students are learning what we expect.</p>

III. Competency: Writing and Communication
College: Oxford College
Period of Analysis: 2010-11, 2011-12

<p>Means of Assessment</p>	<p>On a yearly basis, Oxford collects papers from three disciplines and assesses those papers looking at the structure of the paper, the nature of the argument, and the use of evidence. Different rubrics have been used in different years. The assessors are faculty members and each paper is read by two.</p> <p>In 2010-11, the assessment used a four-point scale (rubric) to assess (a) control of syntax and mechanics, (b) context of and purpose for writing, (c) topic selection and content development, (d) sources and evidence, and (e) disciplinary conventions. The rubric used was an amalgam of two AAC&U's Value rubrics—"Inquiry and Analysis" and "Written Communication"—meant to enable assessing both writing and research skills.</p> <p>In 2011-12, the assessment used a three-point scale (rubric) to assess (a) style and grammar, (b) argument and structure, and (c) research skills. Because those scoring last year's papers felt the rubric used for 2010-2011 was too complex to be useful, the rubric for 2011-2012 was simplified to clarify the central goals of student writing and research.</p>
<p>Criteria for success</p>	<p>1. An Oxford College graduate will communicate clearly and effectively in writing for different audiences and purposes.</p> <p>2. An Oxford College graduate will understand and be skilled in literature-based research. Specifically, a graduate will be able to write a research paper that begins with a skillfully constructed thesis statement that is evaluated, supported, and defended by appropriately interpreted and cited authoritative sources.</p>
<p>Justification for chosen criteria</p>	<p>The rubric used in 2010-11 was meant to enable assessing both writing and research skills (see above). The 2011-12 rubric was a simplified version.</p>
<p>Findings</p>	<p>In both evaluations, students were most successful in the mechanics of writing. Students have proficiency in the conventions of writing and using research skills, but need assistance in developing their own arguments and applying evidence to support those arguments.</p>
<p>Analysis of the extent of attainment</p>	<p>Faculty have not determined achievement goals for these assessments. They plan to have those goals set for the 2012-13 assessment. The faculty have also determined that research and writing should be evaluated separately.</p>

<p>Actions taken as a result of the assessment</p>	<p>Based on the experiences with the research paper analysis, it was decided that a separate rubric for research based on the AAC&U Value Rubric for Research would be used and that the library would assume a role in analyzing bibliographies of papers submitted. Librarians also continue to have conversations with faculty about information literacy needs in order to tailor library instruction to individual courses. With these conversations we continue to move away from "one size fits all" library research classes to sessions specifically targeted to one discipline and one or two specific assignments. This way, even students who have several research classes are introduced to new research content in subsequent classes. The library continues to seek ways to integrate library research sessions into Ways of Inquiry (INQ) courses. In Fall 2012, the library led sessions for classes and disciplines which had never before had a library instruction session. In addition, outside of class, librarians provide in-depth, individual research consultations, customized to discipline-specific research topics.</p>
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IV. Competency: Mathematics and Quantitative Reasoning
College: Emory College of Arts and Sciences
Period of Analysis: Spring 2012

<p>Means of Assessment</p>	<p>The science subcommittee of the Educational Policy Committee developed a multiple-choice test focused on quantitative reasoning skills. The test includes questions on non-causal correlations, extrapolation of relationships, turning words into equations, logic and probability. None of these questions requires specific knowledge, and should therefore provide some insight into general quantitative and reasoning skills.</p> <p>The committee selected a stratified random sample of the three types of courses that fulfill this area of the GER: courses in mathematics, logic, and social science statistics. The instructors were asked to give this short test at the end of their final exam. A total of 274 students in nine courses completed the test.</p>
<p>Criteria for success</p>	<p>The committee hoped that the majority of students would be able to answer each question correctly.</p>
<p>Justification for chosen criteria</p>	<p>These questions reflect a range of quantitative skills. The faculty expected that there may be differences across different types of courses in students' ability to respond to some types of questions, but most students should be able to respond to each one of these.</p>

Findings	There was actually little variation across the courses in the proportion of students who responded correctly. For most questions, 80-90 percent of students responded correctly. For three questions, only half of students responded correctly. Two required students to draw conclusions from charts and one asked students to estimate the probability of an event. The questions that require students to interpret a table suggest that students do not have good skills in this area. The last question resulted in a number of common errors in calculation. There were not significant differences in the ability of students in different kinds of courses to correctly respond to these questions.
Analysis of the extent of attainment	Most students were able to correctly answer most questions, but the analysis suggested areas of weakness in students' ability to understand quantitative information.
Actions taken as a result of the assessment	The faculty subcommittee has not yet shared this information with the instructors of quantitative courses.

V. Competency: Natural Sciences
Colleges: Emory College and Oxford College
Period of Analysis: 2010-11, Spring 2013

Means of Assessment	<p>A multiple-choice test on scientific reasoning that drew questions from published 'concept' inventories was administered to students in introductory courses in fall 2010. The same test was given at the beginning of the semester (usually in the first class meeting) and at the end of the semester during the final exam. Some students took the test in class, others online. The test was given to all 100-level Emory College students in Biology, Chemistry, and Physics.</p> <p>Oxford College students received the SNT test in spring 2013. The analysis of these results is in progress.</p>
Criteria for success	The faculty expected to see statistically significant improvement in students' application of science concepts with small to moderate effect sizes. Reasoning problems were selected that did not require discipline specific knowledge so that performance could be examined on the same items across all courses.

<p>Justification for chosen criteria</p>	<p>A science subcommittee of the Educational Policy Committee (EPC), led by Dr. Chris Beck, reviewed published instruments and identified those with good reliability. Questions were selected that do not require discipline specific knowledge (any necessary information is provided) but ask students to apply the principles of scientific reasoning to problems. The instrument also included questions about students' beliefs about learning as these are thought to moderate problem-solving and reasoning. Expected changes were based on published information about scientific reasoning and research on pre-post changes in the application of science concepts.</p>
<p>Findings</p>	<p>Please see the document "Natural Sciences Assessment Report" for more details and charts of findings. Briefly, difficulties in administering the assessment resulted in only 291 students having complete pre-test and post-test exams. Statistically significant improvements were found on only three of the 24 test items; effect sizes were small. The percentage of correct responses on items ranged from 41 to 97 percent at post-test with 80 percent or more of students providing correct responses on nine different test items. Interestingly, pre-test scores were also high with item scores ranging from 32 to 96 percent at pre-test and 70 percent or more of students providing correct responses on seven different test items. Students had more difficulty with questions requiring explanation of the meaning of observations or with questions that asked them to identify an experiment that would test new hypotheses.</p>
<p>Analysis of the extent of attainment</p>	<p>Despite only three items showing statistically significant, small-moderate learning gains, the majority of students were able to answer most of the questions correctly. This could reflect a ceiling effect in the test items selected or strong high school preparation in the sciences. The evaluation also showed that students struggled with applications and explaining the meaning of their observations. This is consistent with writing on science education that suggests the need to teach meta-cognitive strategies that promote effective problem-solving and to provide students with more problem-solving opportunities as well as settings that promote application and experimentation.</p>
<p>Actions taken as a result of the assessment</p>	<p>The Science Pedagogy group discussed these results. The Science Mentors program, which provides supplemental opportunities for students to solve problems in dyadic and small group sessions, has been enhanced in part in response to these results. Allowing students the opportunity to practice problem solving and to develop meta-cognitive strategies for applying concepts may help address some of the deficits that this test identified.</p>

VI. Competency: Social Science
Colleges: Emory College and Oxford College
Period of Analysis: Summer 2012

<p>Means of Assessment</p>	<p>Emory College and Oxford College jointly assessed learning goals for the social science general education requirement (History, Society, and Culture). The Emory College Educational Policy Committee developed a rubric based on the learning goals for this area. A randomly selected set of social science courses in both schools were asked to collect final papers from their students. A random sample of those papers (ensuring that approximately the same number of papers was selected from each course) was read by two faculty members and four advanced PhD students. Each paper had at least two readers. Seventy-seven papers from Emory College and 54 from Oxford College were evaluated.</p>
<p>Criteria for success</p>	<p>The faculty expected that half of the students would meet or exceed the goals in key theoretical areas: Individual and Society, Group and Society, Culture, and Social Science Theory.</p> <p>The committee included a series of methodological approaches that are commonly used in social science fields, and expected to find that most students were using at least one of those methods. Because the final papers were not always research papers, and because the methods used by students did not fall neatly in these categories, the group reading the papers decided to drop the methods areas.</p>
<p>Justification for chosen criteria</p>	<p>These areas are a reflection of the way in which Emory faculty have defined this area of the GER. The rubric gives a detailed description of each theoretical area.</p>
<p>Findings</p>	<p>The rubric assumed that all papers/students would use each of the four theoretical areas. In fact, most papers focused on one or at most two areas. This was sometimes because of the way the assignment was designed, but often reflected different disciplinary norms. The readers ended up using Not Applicable when they felt they could not assess a student's understanding of an area. As a result, the number of papers which were evaluated in each area varies.</p> <p>Students were very successful in reflecting the goals for Individual & Society, Group & Society, and Culture. However, the variety of approaches and perspectives that emerged in these papers pointed up the difficulty in developing common learning goals for the social sciences. The difference between approaches in fields like history and psychology, for example, create challenges for an assessment of this area.</p>

Analysis of the extent of attainment	Seventy to eighty percent of students met or exceeded expectations for Individual & Society, Group & Society, and Culture. Half or fewer students met or exceeded expectations for Social Science Theory. Emory College students were somewhat less successful in this area.
Actions taken as a result of the assessment	The Educational Policy Subcommittee on the social sciences has had a series of meetings to reassess the learning goals in this area. They are considering one of two approaches: developing a series of learning goals and asking faculty to identify which goals they are seeking to achieve in a course, or identifying common goals to be achieved despite differences in approach.

VII. Competency: Humanities, Arts, and Performance
Colleges: Emory College and Oxford College
Period of Analysis: Summer 2012

Means of Assessment	Emory College and Oxford College jointly assessed learning goals for the Humanities general education competency (see the HAP Assessment Documents). The Emory College Educational Policy Committee developed a rubric based on the learning goals for this area. Faculty in a randomly selected set of humanities courses in both schools were asked to collect final papers from their students. A random sample of those papers (ensuring that approximately the same number of papers was selected from each course) was read by two faculty members and four advanced PhD students. Each paper had at least two readers, and 111 papers from Emory College and 64 from Oxford College were evaluated.
Criteria for success	The faculty expected that the majority of the papers would meet or exceed expectations in each area.
Justification for chosen criteria	These criteria were developed by the humanities subcommittee to reflect the goals set by the faculty for humanities courses.
Findings	The three areas the rubric considered were Engagement with the Humanities, Critical Thinking, and Expression and Articulation. Most students met or exceed expectations in those areas. After their evaluations, readers identified students' use of evidence as a problem. Students could develop a thesis, but they had difficulty using appropriate evidence in a way that would support that thesis. This was not part of the rubric but was a deficit in student papers that the committee felt was worth mentioning. The social science committee meeting the same day independently identified this problem in the papers they read.

Analysis of the extent of attainment	Students in both Emory College and Oxford College met or exceeded expectations for Engagement with the Humanities and Reflection and Articulation. Less than half of the Oxford College students achieved the goals for critical thinking.
Actions taken as a result of the assessment	The humanities subcommittee in the Educational Policy Committee sent a memo to the directors of undergraduate study in humanities departments summarizing the results of the assessment. They asked departments to comment on the results and possible responses in the curriculum, and to evaluate the rubric used.