

Quantitative Literacy for the 21st Century
A Quality Enhancement Plan developed by
Emory & Henry College
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Emory & Henry College's Quality Enhancement Plan (QEP) is *Quantitative Literacy for the 21st Century*. Quantitative literacy (QL) is the ability to formulate, evaluate, and communicate conclusions and inferences from quantitative information and to use these skills in academic, professional, and personal contexts. Emory & Henry chose this topic after a series of campus conversations that included students, faculty, staff, administrators, and alumni revealed an interest in and commitment to enhancing the quantitative experiences of our students. Additionally, the Association of American Colleges and Universities (AAC&U) in their 2005 report *Liberal Education Outcomes* cites the need for quantitative literacy as one of the "key outcomes that all students, regardless of major or academic background, should achieve during undergraduate study."¹

The goals of our QEP emerge from the idea that a quantitatively literate person should employ analytical arguments and use reasoning built upon fundamental concepts and skills of mathematics and statistics. At Emory & Henry, we seek to place quantitative literacy on an equal footing with other fundamental skills such as writing, oral presentation, and information literacy, and we plan to broaden the spectrum of quantitative topics encountered by the typical student. Our QEP has two significant goals related to student learning:

- To improve the mathematical reasoning and quantitative literacy skills of Emory & Henry College students.
- To strengthen the visibility of quantitative literacy as an important component of our students' liberal arts education, both in and out of the classroom.

Each goal is accompanied by multiple, measurable, student learning objectives and assessment strategies. Our plan includes detailed timelines, leadership responsibilities, and resources necessary to accomplish each objective. Some specific implementation strategies and the projected timelines established to meet the above goals include:

- Creation and staffing of a QL Center, whose director will oversee placement testing, supervise student tutors, provide training seminars, and assess the progress of the QL program. This facility will be integrated with the Powell Resource Center, the existing facility for student support and academic assistance. (2007-2009)
- Establishment of a quantitative literacy proficiency requirement, including the creation and adoption of 100-level QL courses. (2008-2010)
- Adoption of precise placement examinations to be administered to students upon matriculation and used for academic advisement and course selection. (2008-2009)
- Workshops designed to encourage faculty across all disciplines to learn about quantitative literacy. The purpose of these workshops is to assist in the development of discipline-specific QL modules that can be incorporated into a wide variety of courses across campus. (2009-2011)
- Co-curricular seminars and workshops on quantitative topics including personal finance. (2009-2012)

The QEP, fully approved in December 2007, will be implemented by the end of the 2012 academic year. At the end of the five-year period, the QEP implementation and advisory team will assess the QEP and create an updated plan for sustainability of the QL program and its initiatives to ensure continuation into the future.

A detailed assessment plan has been developed that includes specific learning objectives, clear assessment practices and expected results relating to the intended outcomes for improving quantitative literacy. Direct measures of student learning include student performance on standardized quantitative literacy exam questions, other standardized exams including GRE and PRAXIS I, and other embedded test questions. We will compare the results of our proficiency exam with the results from at least one other institution in order to provide an external measure of the success of our program. These data will be supplemented by indirect measures including the number of courses that incorporate quantitative modules and student satisfaction surveys.

The committed budget for this effort—including the director's salary, test instruments, establishing a QL center, stipends for faculty, computers and software, and other expenses—is approximately \$450,000 over the five-year period.

¹ Association of American Colleges and Universities, *Liberal Education Outcomes: A Preliminary Report on Student Achievement in College*. Washington, DC: 2005.<<http://www.aacu.org/advocacy/pdfs/LEAP%5FFINAL.pdf>>