UNIVERSITY OF DAYTON ASSESSMENT ACTIVITY FORM

Department/Program: Mathematics/MTA, MTE, MTH **Chair:** Joe Mashburn
Date: May 23, 2011

Scholarship: All undergraduates will develop and demonstrate advanced habits of academic inquiry and creativity through the production of a body of artistic, scholarly, or community-based work intended for public presentation and defense.

Learning Outcome 1: The student will understand the basic axioms, concepts, constructions, theorems, and proof techniques in the core areas of classical undergraduate mathematics.	
Measures	**Results**
Measure 1 (MTA): The student will have successfully passed the introductory foundations course (MTH 308), a course in analysis (MTH 330), a course in abstract algebra (MTH 360), and a course in probability (MTH 411).	All 5 MTA graduating seniors successfully passed these courses.
Measure 1 (MTE): The student will have successfully passed the introductory foundations course (MTH 308), a course in analysis (MTH 330), and a course in probability (MTH 411).	No MTE majors graduated in December 2010 or May 2011.
Measure 1 (MTH): The student will have successfully passed the introductory foundations course (MTH 308), the sequence in analysis (MTH 330 and MTH 430), and a course in abstract algebra (MTH 361).	All 8 MTH graduating seniors successfully passed these courses.
Measure 2: Among those students who intend to pursue graduate study in a mathematical science, at least 50% will be admitted to a graduate program of their choice.	All three seniors who applied for graduated school were admitted to graduate school of their choice.
Measure 3: Each student shall submit at the time of the exit interview a written example to demonstrate reasoning ability in a formal axiomatic system.	Ten out of 14 seniors submitted written evidence of reasoning ability in a formal axiomatic system. The evidence showed that they were able to reason in this way.
Measure 4: Each student shall submit at the time of an exit interview a written example to demonstrate the ability to construct rigorous analytic arguments.	Thirteen out of 14 seniors submitted written evidence of the ability to construct rigorous analytic arguments. The evidence showed that they were able to construct such arguments.

Learning Outcome 2: The students will exhibit the ability to organize and effectively communicate mathematical ideas to others, both in writing and orally	
Measures	**Results**
Measure 1: More than 50% of the graduating seniors will have been employed as teaching assistants or tutors in the Department of Mathematics.	Twelve out of 13 seniors were employed as teaching assistants or tutors at some time during their studies at the University of Dayton.
Measure 2: More than 50% of the graduating seniors will have participated in one of the various extracurricular activities available to all UD students. These include: presentation at the Stander Symposium, presentation at Undergraduate Mathematics Day, submission of an article to the Electronic Proceedings of Undergraduate Mathematics Day, participation in the international UMAP competition (which includes writing an article and presenting results to the faculty), a presentation at a meeting of the Math Club.	Five out of 14 seniors participated in one or more of these kinds of activities. The low participation number is due, at least in part, to the fact that for at least 7 of the seniors mathematics was a second major.