

UHCL Assessment Plan  
FY07 (or academic year 2006-07)

School of Science and Computer Engineering

**This assessment plan was chosen as example plan because it contained specific use of results to improve student learning. In some cases, wording were modified slightly for illustration purposes**

Mathematical Sciences - BA and BS

Learning Outcomes Assessment

Learning Outcomes	ULO <sup>1</sup>	Assessment Methods	Criteria for Success	Assessment Results	Use of Results
Students are able to apply core competencies of Linear Algebra, Probability, and Modern Algebra/Number Theory (BA only), Differential Equations (BS only) to solve problems.	a, h	1.Degree audit showing completion of courses in the core curriculum 2.Audit of Linear Algebra, Probability, and Modern Algebra/Number Theory (BA only) or Differential Equations (BS only) examination questions related to core knowledge in the field.	1.Degree audit showing completion of courses in the core curriculum (100%) 2.Audit of Linear Algebra, Probability, and Modern Algebra/Number Theory (BA only) or Differential Equations (BS only) examination questions related to core knowledge in the field.(At least 75% of core knowledge related questions solved correctly by at least 75% of the people.)	100% of Students showed completion of courses in core curriculum. Audit of core curriculum: Math 3231 Calc III 100%.Math 4331 Adv Calc Fall 79%, Spring 80%. Math 3131 Linear Alg Fall 100% & 83%, Spring 60% (only 5 students). Math 4131 Diff. Equations. Fall 83%, Spring 100%. Math 4030 Spring (only) 83%	Continue to assure satisfactory student achievement in core knowledge in courses where objectives were successfully met. Regarding core knowledge in Math 3131, Linear Algebra, work with instructors to focus to a greater degree on core knowledge. Furthermore, we'll work with the Math 3131 Teaching Assistant as well as the Mathematics Center to increase student awareness of opportunities for academic help with this core knowledge. An increased amount of class time will be devoted to core knowledge in order to increase student achievement. Note: There appeared to be a problem with only one of 4 sections and that section had a very small number of BA/BS students.

## Learning Outcomes Assessment

Learning Outcomes	ULO <sup>1</sup>	Assessment Methods	Criteria for Success	Assessment Results	Use of Results
Students are able to generate proofs correctly.	a, h	1. Degree audit showing completion of courses in the core curriculum 2. Audit of proof-related examination questions from Linear Algebra, Probability, and Modern Algebra/Number Theory (BA only) or Advanced Calculus (BS only)	1. Degree audit showing completion of courses in the core curriculum (100%) 2. Audit of a set of proof-related examinations questions from Linear Algebra, Probability, and Modern Algebra/Number Theory (BA only) or Advanced Calculus (BS only) (At least 50% of proof-related questions indicate significant proof skills.)	100% of Students showed completion of courses in core curriculum. Audit of core curriculum: Math 4331 Adv Calc Fall 95%, Spring 90%. Math 3131 Linear Alg Fall 75% & 40% (5 students), Spring 40% (only 5 students). Math 4131 Diff. Equations. Fall 83%, Spring 100%. Math 4030 Spring (only) 67%	Continue to assure satisfactory student achievement in proof-related knowledge. Regarding proof-related knowledge in Math 3131, work with instructors to focus to a greater degree on proof-related skills. An increased amount of class time will be devoted to proof-related knowledge in order to increase student achievement. Furthermore, we'll work with Teaching Assistant as well as the Mathematics Center to increase student awareness of opportunities for academic help with this proof-related knowledge and skills.

### <sup>1</sup>University Learning Outcomes (ULO)

In developing student learning outcomes, select from the list below the university level learning outcome(s) that match most closely to the learning outcomes.

- a. Critical Thinking - The mastery of higher order thinking skills including quantitative and qualifying analysis, synthesis, and evaluation of information, argumentation, problem solving, and creativity.
- b. Communication - Effective written and oral expression including the use of such media as audio, video, text, and graphics.
- c. Information Technology - The application of information technology to search for, access, retrieve, organize, interpret, and transfer information.
- d. Interpersonal Competence - The capacity to understand many points of view and to work responsibly with others in a variety of settings.
- e. Ethical Citizenship - The ability to make ethical decisions in person and professional societal contexts

- f.** Global Perspective - The capability to demonstrate awareness of local and global diversity, within the students chosen discipline, the international economy, and the interrelated worldwide environment.
- g.** Self-directed Learning - The ability to identify, assess, revise, and monitor learning to achieve personal and professional goals.
- h.** Other: Professional accreditation standards