Annual Report for 2012

Department of Mathematics and Statistics (DMS)

Student Learning Outcomes Assessment (SLOA) for MS

Degree in Mathematics

INTENDED OUTCOMES OBJECTIVES	ASSESSMENT CRITERIA	IMPLEMENTATION PROCEDURES (what, when, who)
1) Our curriculum will be comparable to national standards	Compare our program to University of Idaho, University of Wyoming, and University of North Dakota.	Every three years, the members of the Graduate Committee from mathematics will compare our program to the three specified institutions and give a report on their findings to the assessment committee to include in the annual report.

Status: The University of Idaho program has 17 math faculty, and appear to have 16 graduate students. The M.S. program requires students take a similar number of courses to UAF, but has comprehensive examinations on 6 topics, and does not require a project or thesis. Course offerings are slightly more extensive than UAF's.

The University of Wyoming has around 24 mathematics faculty members, and 21 graduate students (ALL of whom are supported through TA-ships!). Graduate course offerings are approximately double UAF's. The MS program is similar to UAF's, requiring both a qualifying exam and a thesis/project.

The University of North Dakota has 19 faculty, and about 10 graduate students, all with TA funding. It offers only M.S. and M.Ed. degrees, based entirely on course work, without qualifying exams or theses/projects. Although the UND catalog lists more courses than UAF offers, it appears that actual offerings are quite similar (3 or so graduate courses per semester).

UAF has only 10 full-time math faculty members to contribute to the graduate math program. Given our smaller faculty size, we have done a good job of maintaining quality programs, but we are probably a bit over-extended. Of the comparison schools, only Wyoming has courses approaching a Ph.D. level, and it has twice the staffing and many more TA-ships. We are perhaps most similar to Idaho, though with many fewer graduate students. Our program is clearly within the range of these schools', and our requirement for an M.S. project is a strength over some of their programs.

2) Our students will master a core of mathematical concepts.	All students are required to take and pass four core courses. In order to graduate, all students must take and pass a collection of exams on core subjects.	Every spring, comprehensive exams will be given, graded, and discussed by the majority of the math faculty. A summary of the results will be prepared by the members of the Graduate Committee from mathematics to be included in the yearly assessment report.

Status: During the period covered by this SLOA report (AY 2011 and AY 2012), there were 9 students enrolled in the MS program in mathematics. Of these, a total of three of these students took the comprehensive exam sequence, with two passing and one incomplete (i.e., one or more parts of the comprehensive exam sequence had to be retaken).

The four required MS-level core courses have, as stated in the UAF academic catalog, been taught one-per-semester in recent years, including the AY 2011 and AY 2012. Two additional graduate elective courses are generally offered each semester so that completing the MS in mathematics program in a two-year time frame is reasonable.

3) Our students will have the opportunity to develop the skills necessary to achieve their career goals in mathematics.	alumni survey	Every May, alumni surveys will be sent to all students who graduated with a degree in mathematics two years prior. The returned surveys will be summarized by the assessment committee in the annual report the following spring.

Status: No alumni surveys have been returned during the period of this SLOA report (i.e., AY 2011 and AY 2012). However, of the four MS graduates during the period covered by this report, one is employed by UAF, one is pursuing a PhD in mathematics, another is pursuing a PhD in a related field, and the fourth student's status is not known.