

Assessment Reporting Spring 2009 – Spring 2010

PROGRAM INFORMATION

Degree Program(s):	MA/MS Mathematics	Department:	Mathematics
Department Chair:	Brad Jackson	Phone:	924-5173
Report Prepared by:	Brad Jackson/Julie Sliva	Phone:	924-5120
Next Self-Study due :	Next external review Fall 2013	E-mail:	Jackson@math.sjsu.edu

Schedule of Planned Assessment Activities

In 2008-2009, an external review of the Math Department was performed by Dr. Sheldon Axler, Dean of the College of Science at San Francisco State University.

In 2009-2010, the math department has been discussing Dr. Axler's suggestions and trying to figure out what we want to do about them. We plan to have our next external review in Fall 2013.

In Fall 2010, data will be collected to analyze student performance regarding Goals 6 and 7 relating the effective communication skills of students in our MA/MS programs. This data will be discussed in Spring 2011. Any necessary changes will be implemented as soon as possible after that.

The Math Department has the following masters degrees, an MA Math, and an MS Math degree. The MA Math degree has a Concentration in Mathematics Education and an Emphasis in Statistics. The MS Math degree has an emphasis in Applied math.

Several changes have been made in our graduate curriculum. One graduate course, Math 213 Differential Geometry, was decided to be ineffective and it was changed to a two-semester sequence, Math 213A Intro to Smooth Manifolds, and Math 213B Intro to Riemannian Geometry. In addition, we have decided that the learning objectives of our existing MA/MS programs while adequate for students interested in teaching, research, or advanced studies in Mathematics, are not as appropriate for students who want to work in business, government, and industry. This change was suggested by Professor Slobodan Simic who usually teaches this course in part because the course syllabus contained far too much material to be covered in a one semester course. Our graduate students are required to take one two semester sequence to ensure that they study at least one area of mathematics in depth. This change will give them one more option to choose from. The new sequence will be taught in 2010/11.

We are in the process of applying to implement an MS Statistics program, which will be a Professional Science Master's degree. In fact, the program has already been approved by the Council of Graduate Schools to receive the designation as a Professional Science Master's degree, once it gets approved by the university. In designing our program we solicited information from the local Bay Area statisticians by sending out a survey. We also found five volunteers to sit on an Industrial Advisory Board to oversee this new program. We are hoping to have this program approved for implementation in Fall 2011. The goals of this program are aligned with the guidelines of a Professional Science Master's program set forth by the Council of Graduate Schools. The goals of this program are to 1) help students to become interdisciplinary by taking courses in an area where statistics can be applied, in addition to the courses they take in the Math Department, 2) help students learn effective communication skills, 3) help students learn useful computing/technology skills, and 4) help students learn good consulting/modeling skills. This new program, if approved, will start in Fall 2011.

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Department Chair:	Bradley Jackson	Phone:	
Report Prepared by:	Bradley Jackson	Phone:	

Student Learning Outcome (SLO)

The change in Math 213 is not closely aligned with either LO 6 or 7. Once implemented, the new MS Statistics program will likely have different learning objectives than the existing MA/MS mathematics programs.

Evidence for Need:

The need for a change was brought up by the instructor of the course because the course outline contained too much material to cover in a one semester course.

Changes to Curriculum or Pedagogy:

A two semester sequence was formed.

Evidence for Impact:

The Mathematics Department MA/MS program underwent an external review by Sheldon Axler, Dean of the College of Science at San Francisco State University in February 2009 (along with the rest of the Math Department programs). No further assessment was done in the academic year 2008/2009. The MA/MS will be thoroughly assessed in 2009/2010 to answer the following questions. 1) Can we maintain the quality of the MA/MS program while increasing enrollment ? 2) Is it necessary to change the MA/MS Math programs so that students are more likely to graduate with an MA/MS Math degree in two years? 3) Are the learning objectives of the MA/MS Math programs being met?

Learning Objectives

Outcomes - MS Mathematics and MA Mathematics and MA Mathematics, Concentration in Mathematics Education Goals 6-7

Goal 6 The Ability to Read, Understand, and Explicate Journal Articles in Mathematics Related to the Student's Area of Specialty

Goal 7 The Ability to Communicate Mathematics Effectively

1. Ability to explain mathematics orally
2. Ability to write clear mathematical explanations