Online Assessment Tracking Database

Sam Houston State University (SHSU)
2014 - 2015

Mathematics MS

Goal **Develop Research Skills**

Students who choose to complete a thesis will develop research skills

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Objective (L) **Demonstrate Graduate-Level Research Skills**

Students completing the MS with a thesis will demonstrate skills in completing original research.

Indicator **Thesis Defense Rubric**

The attached rubric will be used to rate student research during the thesis defense.

Criterion **Rating On Thesis Defense Rubric**

MS students choosing to complete a thesis will score either a "fail", "pass" or "high pass" on their thesis based on the given rubric.

There are no actions for this objective.

Objective (L) **Participation In Colloquia**

Faculty will hold a regular colloquium series and graduate students will be encouraged to participate in that series.

Indicator **Consistent Colloquium Series**

The Faculty Colloquium series will have 3 or more meetings per month. One or more talks during the school year in the colloquium series will be given by graduate students. At least half of the graduate students will attend that colloquium on a regular basis.

There are no actions for this objective.

Goal **Emphasize Written Communication Skills**

The curriculum will provide students with opportunities to develop the skills typically required of professionals in the area of study.

Objective (L) **Communicating Mathematical Ideas-Written**

Students will be able to write rigorous proofs of mathematical statements, read mathematical research manuscripts, write formal mathematical papers, and use critical thinking skills to solve research problems.

Indicator **Comprehensive Examination**

Students in the MS program will take a written comprehensive examination in the areas of abstract algebra, analysis. The examination will be scored by a committee of faculty.

Criterion **Examination Criteria** DRAFT

At least two-thirds of our students will pass their comprehensive examinations on their first attempt.

There are no actions for this objective.

Objective (L) **Students Will Be Proficient At LaTeX**

Graduate students will become proficient in the use of LaTeX for mathematical writing.

There are no actions for this objective.

Objective (L) **Conversation On Teaching**

Graduate faculty and graduate students will regularly discuss the teaching profession.

Indicator **Teaching Seminar**

Graduate faculty will lead a teaching seminar with participation from graduate students. This seminar will meet at least monthly.

There are no actions for this objective.

Goal **Develop Consistent & Stable Cohort Size**

A fall cohort of ten supported graduate students allows us to maintain a healthy program with consistent class sizes, class schedules and graduation rates above 7 students per year.

Objective (P) **Support Ten New Students Each Year**

We will support ten new graduate students each year, as many as twenty in the two years of our program. Support should be such that fulltime students are supported by at least $10,000 more than the cost of tuition and fees.

There are no actions for this objective.

Objective (L) **Focus On Fall Cohorts**

We will focus on strong Fall term cohorts of 10 students. We will rarely allow students to enter during the Spring term. Students will not be allowed to enter in the Summer term.

There are no actions for this objective.

Goal **Improve Graduate Student Support**

We will increase graduate student support so that our program attacts good students who can study fulltime.

Objective (P) **Graduate Assistants Should Not Need A Second (Outside) Job**

We will increase graduate student support so that students in the program, including international students, can earn $1000/mo over tuition and fees. This will eliminate the need for our teaching assistant grad students to take a second outside job. (A second job + TA + 3 classes is difficult for domestic students and is illegal for international students.)

There are no actions for this objective.

Goal **Improve Instruction By TAs**

We will improve our instructional support for TA instruction in 1000-level classrooms.

Objective (P) **Mentoring Of 1000-level Instructors**

We will actively mentor graduate students teaching 1000-level classes.

There are no actions for this objective.

Objective (L) **Conversation On Teaching**

Graduate faculty and graduate students will regularly discuss the teaching profession.

Indicator **Teaching Seminar**

Graduate faculty will lead a teaching seminar with participation from graduate students. This seminar will meet at least monthly.

There are no actions for this objective.

Objective (L) **Participation In Colloquia**

Faculty will hold a regular colloquium series and graduate students will be encouraged to participate in that series.

Indicator **Consistent Colloquium Series**

The Faculty Colloquium series will have 3 or more meetings per month. One or more talks during the school year in the colloquium series will be given by graduate students. At least half of the graduate students will attend that colloquium on a regular basis.

There are no actions for this objective.

Objective (P) **Stable Teaching Program**

We will develop a consistent and stable teaching schedule and program for TAs teaching 1000 level classes.

There are no actions for this objective.

Goal **Improve Graduate Student Environment**

We will increase and improve the graduate student environment, including office space and quality of office space, desks, tutoring area.

Objective (P) **Increased Office Space**

We will increase office space to comfortably handle 20 MS-Math students, each with their own desk and access to personal file cabinets.

There are no actions for this objective.

Previous Cycle's "Plan for Continuous Improvement"

Comprehensive exams and exam sequences are more consistent and more rigorous. We will continue to improve these sequences with with graduate faculty active on each of the Algebra Committee and the Analysis Committees.

We are in the process of increaing the number of courses offered each semester to five (plus research/thesis), allowing more diversity in the elective courses and encouraging students to specialize in applied mathematics or preparation for doctoral studies.

We continue to work on raising both the stipends (using a variety of scholarships and grant monies) and also raising the number of assistantships offered.

Please detail the elements of your previous "Plan for Continuous Improvement" that were implemented. If elements were not implemented please explain why, along with any contextual challenges you may have faced that prevented their implementation.

Comprehensive exams continue to improve and become more consistent and rigorous. We now offer 5 classes per semester but struggle to get 5 students into some second-year classes.

Stipends continue to be unreasonable, while tuition and fees skyrocket, now over $7000 per year for in-state students. Inconsistent and changing university policies led one student to be charged out-of-state tuition despite promises to the contrary; she has now left the program due to inability to pay that tuition. The number of assistantships and their values is declining, despite our best efforts and we need significant university support if we are to maintain our current level of 20 students in the MS-Math program.

Plan for Continuous Improvement - Please detail your plan for improvement that you have developed based on what you learned from your 2014 - 2015 Cycle Findings.

Current stipends and assistantships mean that many international applicants (approx 20/year) do not enter the program and some that come do not stay. International students are poorly supported by the campus. Meanwhile many domestic applicants have poor math preparation and struggle in the program.
(3 of 9 Fall 2015 grad new assistants either did not arrive in August or left shortly after classes began.)

We need to increase domestic recruiting of local students (Houston, SHSU) and see if we can build a domestic cohort while still recruiting a few students from pipeline countries like Sri Lanka.

We need the university to implement a tuition waiver for high quality, personally recruited minority students.

We need to begin a Bachelors+Masters 5 year program that will move some of our good math undergraduates into our program in a seamless manner.