Online Assessment Tracking Database

Sam Houston State University (SHSU)
2014 - 2015

Mathematics MA

Goal

Deliver A Curriculum With Appropriate Discipline Specific Knowledge

The curriculum will address the discipline specific knowledge dictated by professional societies and/or professionals in the workforce.

Objective (L)

Understanding Mathematical Structures

Students will prove theorems or solve problems or explain concepts in the following core areas

- abstract algebra structures such as groups, rings, fields, functions, homomorphisms, and isomorphisms.
- differential and integral calculus
- probability and statistics, particularly inferential statistics, and
- transformational geometry to include isometrics and non-isometric transformations such as circles of inversion.

Indicator

MA Comprehensive Oral Examination

Students in the MA program will take an oral examination over the four areas covered in the objective. The oral examination will be scored by a committee of faculty using a rubric developed and approved by department faculty.

Criterion

Successful Completion Of Comprehensive Exam.

100% of the MA students will receive a grade of "Pass" or "High Pass" on each of the four areas according to the attached rubric.

Finding

Completion Rate

Two out of two MA candidates successfully completed their oral comprehensive examination. However, one candidate did need to have a re-test on the analysis portion of the exam. He received a passing grade on the re-test.

Action

Continuing With Oral Examinations.

The faculty who teach MA courses feel confident that the oral exams are an appropriate method of assessing MA candidates understanding of our core courses. We plan to continue this.

At the moment, MA candidates taking the oral exam do need to do this at the Huntsville campus. It may be in the future that we will need to consder administering the exam via ITV should an unusual case warrant it.

Goal

Develop Research Skills

Students will develop research skills commensurate with graduate student status.

Objective (L)

Demonstrate Research Skills

Students completing the MA in Mathematics will demonstrate research skills.

Indicator

Research Project Assessment

MA students complete an independent research project. The student works with a supervising professor who describes the oversees and evaluates the work required of the student. A grade is assigned based on the individual requirements set forth by the supervising professor.

Criterion

80% Or Better On Project Assessment

Students will be rated at least 80% on the project rubric.

Finding

Project Assessment Grades

Two out of two MA candidates received an A on their master's project, thus meeting the stated goal.

Action

Scholarly Publications Or Conference Presentations As A Product Of The MA Project.

As stated, the MA project is an independent research project and, most times, when the project is completed, no further action is taken.

Just recently, we had one MA project that was particularly insightful, causing the student and her supervising professor to craft a paper to be submitted for publication.

A second MA candidate, who intends to graduate in December 2015 is working on a project with the same goal in mind.

This new direction with our MA projects is interesting as it may be laying the foundation for a new PhD program application.

Previous Cycle's "Plan for Continuous Improvement"

We will be adding Non-Euclidean Geometry to our course offerings, probably in the fall of 2015.

We currently have a cohort of six high school mathematics teachers from Aldine ISD who are seeking MEd degrees from Educational Leadership. We worked with the Ed Leadership faculty to develop a set of six mathematics courses the students could take. This was a new (and unanticipated) development that happened during the 2013-2014 school year. If this proves successful, we hope to offer it to another cohort of teachers in another school district.

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.

We did not offer non-Euclidean Geometry this fall. The decision was made to offer our core MA courses during the long semesters and offer elective courses in the summer sessions.

We had also hoped to gain approval for non-Euclidean geometry as a permanent course, rather than having to offer it as a special topics. Class. Unfortunately, the paperwork seems to have gotten lost in the curriculum approval cycle. So we will try again this year.

The cohort from Aldine has moved along well through our program of classes and they are finishing up this fall. No discussions have been forthcoming about forming additional cohorts at this time, though.

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.

We intend to continue to look into establishing MA cohorts with school districts and with ongoing programs in the College of Education.

One trend that has started within this past year is getting applications from students who wish to pursue the MA degree full-time. Most of our students are inservice secondary mathematics teachers who go to school full-time. However, in the past year we have received three new applications for the MA program from students who want to get the MA degree and then move on to a PhD program in Mathematics Education. These applications have come from international students. Because of this, we hope to create a marketing plan to attract more of these students.

The biggest obstacle to this is the number of TA positions allocated to the department. At the moment, we have 26 graduate TAs - most of them are in the MS programs in mathematics or statistics. Part of the department's next strategic plan will have to address ways to increase the number of TAs.