Mission / Purpose

The principal objective of the Department of Mathematics at the University of New Orleans (UNO) is to provide quality education opportunities at the undergraduate and graduate levels for students pursuing degrees in mathematics, and, to teach a number of service courses in mathematics which serve other degree programs at UNO. The department intends for mathematics majors to acquire a broad and solid base in mathematics to prepare students for both further study and to work as mathematicians. The focus of the department is excellence in teaching and learning mathematics. Our teaching goals include preparing students for a wide variety of careers, including those in actuarial mathematics, applied mathematics, pure mathematics, statistics, and mathematics education. The department promotes participation in mathematical activities at local, regional, and national levels. Professional and community activity of faculty members is critical to support this mission, and we work to extend strengths in research, exposition, and professional leadership while maintaining a tradition of service to the College community and beyond.

Student Learning Outcomes/Objectives, with Any Associations and Related Measures, Targets, Findings, and Action Plans

SLO 1: Thesis research
Graduate students will acquire an advanced understanding of concepts in areas related to their thesis research and/or area of specialty.

Related Measures

M 1: Research project
All graduate students will complete a research project/master's thesis. The work will be orally presented.

Source of Evidence: Senior thesis or culminating major project

Target: Spring 2014

Findings: As explained in Fall 2013, the department had decided to require a comprehensive examination instead of a thesis project for those who choose non-thesis option for MS degree. In this Spring semester, six students are graduating; they took and passed the examination in April. Their exam scores were 90, 84, 90, 97, 73, 80.

Related Action Plans (by Established cycle, then alpha):

Comprehensive exam
(a) In the proposed new MS-Math degree requirements, the student is given the choice of whether or not to write a Master's Degree Thesis. Students who choose to write a thesis must give a satisfactory performance on an oral presentation of the thesis. Students who choose the non-thesis option must give a satisfactory performance on a comprehensive written examination that covers courses given by the mathematics department for graduate credit. Based on this, in the 2014–15 cycle, We will change the MEASURES from Research Project/Master’s Thesis to Comprehensive Examination or Master’s Thesis.

Established in Cycle: 2013-14
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Research project | Outcome/Objective: Thesis research

SLO 2: Construct and effectively present information and concepts
Graduate students will be able to construct and effectively present information and concepts visually and verbally through oral presentations.

Related Measures

M 2: Oral presentation
All graduate level courses will require students to submit at least one oral presentation on a topic relevant to the course.

Source of Evidence: Presentation, either individual or group

Target:
80% of the students will achieve a B or better grade on their presentations using a grading rubric developed by the mathematics faculty.

Finding (2013-14) - Target: Partially Met
Fall 2013 Findings: There were four 6000-level graduate courses offered in the Fall 2013 semester. This reporting cycle we did not take this measurement to apply to 4000G (to be renumbered as 5000-level in future semesters) level classes. Each student in the three graduate courses Math 6351, 6382, 6385 gave an oral presentation on a research topic which was approved or assigned by the instructor. 100% of the presentations were graded as B grade or better. Math 6301 was offered as an online class so there were no oral presentations. Instead, the students in Math 6301 submitted a written research project which counted 15% of their overall grade. Spring 2014 Findings: There were four 6000-level graduate courses offered in the Spring
2014 semester. They were Math 6201, 6450, 6304, and 6341. Each student in Math 6304 and 6341 gave an oral presentation on a research project assigned by the instructor. In Math 6331, 80% (9 out of 11) of the students scored B grade or better; in Math 6304, 100% of the students scored B or better; in Math 6201, 100% of the students scored B or better. Math 6450 did not do oral presentations due to the nature of the course and time constraint. Still in this reporting cycle we did not take this measurement to apply to 5000-level level classes.

Related Action Plans (by Established cycle, then alpha):

**presentation**
We will try to find a way to do oral presentations for internet classes. 5000-level classes are hybrid classes containing both undergraduate and graduate students. Some 5000-level classes are large having over 20 students, so having an oral presentation from each student is time consuming. We need to find a feasible way to conduct the presentations.

**Established in Cycle:** 2013-14
**Implementation Status:** Planned
**Priority:** High
**Relationships (Measure | Outcome/Objective):**
Measure: Oral presentation | Outcome/Objective: Construct and effectively present information and concepts

SLO 3: Mathematical concepts in technical writing
Graduate students will be able to explain mathematical concepts in technical writing format to demonstrate their advanced understanding of concepts in areas related to their thesis research and/or area of specialty.

Related Measures

**M 3: Written report**
All graduate students will complete a written report on a research project.

**Source of Evidence:** Written assignment(s), usually scored by a rubric

**Target:**
80% of the students will achieve a B or better grade on their oral and written presentations.

**Finding (2013-14) - Target: Partially Met**
Fall 2013 Findings: Every student in each of the four graduate level classes Math 6301, 6351, 6382, and 6385 in Fall 2013 semester had done a project and written a report. The percentage of B or better in each of the courses 6351, 6382, and 6385 was 100%; the percentage of B or better in 6301 was 65%. The overall percentage of B or better of all four courses was 86%. The reason that 6301 had a low percentage, we believe, is because most students in 6301 are new. In this reporting cycle we did not take this measurement to apply to 5000G (to be renumbered as 5000-level in future semesters) level classes. Spring 2014 Findings: There were four 6000-level classes: Math 6304, 6201, 6341, and 6450. Each student in Math 6341 had done a project and written a report, the percentage of B or better was 80% (9 out of 11). For Math 6201, every student did a project and wrote a report, the percentage of B or better was 100%. For Math 6304, 100% of the students scored B or better. Math 6450 did not do project due to the nature of the course and time constraint. In this reporting cycle we did not take this measurement to apply to 5000 level classes.

Related Action Plans (by Established cycle, then alpha):

**written project**
All graduate students in 5000- or 6000-level classes will submit a written presentation on a research project.

**Established in Cycle:** 2013-14
**Implementation Status:** Planned
**Priority:** High
**Relationships (Measure | Outcome/Objective):**
Measure: Written report | Outcome/Objective: Mathematical concepts in technical writing

SLO 4: Student satisfaction
The department will maintain high graduate student satisfaction with the program.

Related Measures

**M 4: Course evaluations**
Graduate level course evaluations.

**Source of Evidence:** Academic direct measure of learning - other

**Target:**
All graduate level courses will achieve at least 4.0 out of 5.0 for overall quality of course.

**Finding (2013-14) - Target: Met**
In Spring 2013, the overall effectiveness (out of 5.0) of the instructor for all the 6000-level graduate courses was the following: 1. Math 6202: 5.00, and 2. Math 6370: 4.80. The average evaluation is well above the target of 4.0. The student evaluations for Fall 2013 semester would become available in Spring 2014 and those would be included in the Spring 2014 reporting period.

Related Action Plans (by Established cycle, then alpha):

**Adjust overall evaluation upwards**
The department would consider adjusting the overall evaluation to 4.10.

**Established in Cycle:** 2013-14
**Implementation Status:** Planned
**Priority:** High
**Relationships (Measure | Outcome/Objective):**
Measure: Course evaluations | Outcome/Objective: Student satisfaction

M 5: Survey
The graduate advisory committee of the department will annually ask the graduate students to participate in a formal survey quantifying the student satisfaction.

Source of Evidence: Academic indirect indicator of learning - other

**Target:**
Graduate student concerns will be brought to the faculty by the graduate advisory committee and discussed during regular faculty meetings.

**Finding (2013-14) - Target: Met**
Fall 2013 Findings: A survey of all mathematics graduate students was conducted in November 2013. 29 forms were received out of 34 students in the graduate program who were invited to take part in the survey. Each question had five choices: Very Satisfied, Somewhat Satisfied, Neutral, Somewhat Dissatisfied, and Very Dissatisfied. Overall, 91% of responses were Somewhat Satisfied or better. The surveys have pointed out some concerns such as the availability of graduate courses towards their degree and the accessibility of some faculty members outside the classroom. Spring 2014 Findings: Since the survey is conducted once a year (November), we didn’t do it in the Spring semester of 2014.

**Related Action Plans (by Established cycle, then alpha):**

**survey**
The department Chair will talk to the faculty members about accessibility outside classroom. The department is offering very limited number of courses in the area of pure mathematics because there are only two students (out of a total of 34) in the area. The department will try to offer courses that benefit students in the areas of both pure and applied math.

Established in Cycle: 2013-14
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Survey | Outcome/Objective: Student satisfaction

**Details of Action Plans for This Cycle (by Established cycle, then alpha)**

**Adjust overall evaluation upwards**
The department would consider adjusting the overall evaluation to 4.10.

Established in Cycle: 2013-14
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Course evaluations | Outcome/Objective: Student satisfaction

**Comprehensive exam**
(a) In the proposed new MS-Math degree requirements, the student is given the choice of whether or not to write a Master's Degree Thesis. Students who choose to write a thesis must give a satisfactory performance on an oral presentation of the thesis. Students who choose the non-thesis option must give a satisfactory performance on a comprehensive written examination that covers courses given by the mathematics department for graduate credit. Based on this, in the 2014-15 cycle, We will change the MEASURES from Research Project/Master’s Thesis to Comprehensive Examination or Master’s Thesis. (b) A barely passing score of 69 on the comprehensive exam showed the weakness of the student on Mathematical Statistics, the course the student took two years ago. The students were notified about what subjects to be tested only two to three weeks before the test this time. In the future, we will notify the students at least two months ahead so that they can be well prepared.

Established in Cycle: 2013-14
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Research project | Outcome/Objective: Thesis research

**presentation**
We will try to find a way to do oral presentations for internet classes. 5000-level classes are hybrid classes containing both undergraduate and graduate students. Some 5000-level classes are large having over 20 students, so having an oral presentation from each student is time consuming. We need to find a feasible way to conduct the presentations.

Established in Cycle: 2013-14
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Research project | Outcome/Objective: Thesis research

**survey**
The department Chair will talk to the faculty members about accessibility outside classroom. The department is offering very limited number of courses in the area of pure mathematics because there are only two students (out of a total of 34) in the area. The department will try to offer courses that benefit students in the areas of both pure and applied math.

Established in Cycle: 2013-14
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
Measure: Survey | Outcome/Objective: Student satisfaction

**written project**
All graduate students in 5000- or 6000-level classes will submit a written presentation on a research project.

Established in Cycle: 2013-14
Implementation Status: Planned
Priority: High

Relationships (Measure | Outcome/Objective):
  Measure: Written report | Outcome/Objective: Mathematical concepts in technical writing