Expected Outcomes: Mathematical terminologies

Students will understand the basic terminologies in Mathematics.

Related typical general education outcomes:

1. Information Literacy
2. Analytical and Critical Reading
3. Ability to Critique Arguments

Assessment methods

Method: Survey of Faculty

Faculty members were surveyed about students’ performance in select upper-level courses required in specialty area. Our Applied Math program has three tracks: AMTH, ADSM, and ACTU. For AMTH, the faculty teaching Math 5000 Mathematical Modeling, Math 5670 Probability and Stochastic Processes, and Math 5630 Numerical Analysis were surveyed. For ADSM, the faculty teaching Math 3710 Discrete Mathematics, Math 5750 Graph Theory, and Math 5310 Algebra I were surveyed. For ACTU, the faculty teaching Math 5970 Actuarial Models, Stat 3600 Probability and Statistics I, and Math 5800 Actuarial Mathematics I were surveyed. Our target rate was 70%.

Findings:

According to the survey, for AMTH the weighted average is 77%; for ADSM, the weighted average is 100%; for ACTU the weighted average is 91%; with the combined average of 86% for all tracks. The target rate was thus met in all the three tracks.

How did you use findings for improvement?

Although the target was met for all tracks, we will continue to improve the performance related to this outcome.

Additional comments:

The input in Math 5310 Abstract Algebra I could not be obtained due to unfortunate passing away of the instructor.

Expected Outcomes: Mathematical Problem Solving

Students will demonstrate the ability to solve mathematicap problems.

Related typical general education outcomes:

2. Analytical and Critical Reading
4. Ability to Construct Arguments
5. Ability to Use Mathematical Methods
Assessment methods

Method: Survey of Faculty

Faculty members were surveyed about students' performance in select upper-level courses required in special area. Our Applied Math program has three tracks: AMTH, ADSM, and ACTU. For AMTH, the faculty teaching Math 5000 Mathematical Modeling, Math 5670 Probability and Stochastic Processes, and Math 5630 Numerical Analysis were surveyed. For ADSM, the faculty teaching Math 3710 Discrete Mathematics, Math 5750 Graph Theory, and Math 5310 Algebra I were surveyed. For ACTU, the faculty teaching Math 5970 Actuarial Models, Stat 3600 Probability and Statistics I, and Math 5800 Actuarial Mathematics I were surveyed. Our target rate was 60%.

Findings:

According to the survey, for AMTH the weighted average is 80%; for ADSM, the weighted average is 85%; for ACTU the weighted average is 91%; with the combined average of 86% for all tracks.

How did you use findings for improvement?

Although the target was met for all tracks, we will continue to improve the performance related to this outcome. An improvement from last year was made in AMTH to meet the goal by a comfortable margin. One instructor suggested that more time needs to be spent on ordinary and partial differential equations. Another instructor suggested to spend more time on computer programming.

Additional comments:

Steps are being taken to incorporate the suggestions of the instructors. The input in Math 5310 Abstract Algebra I could not be obtained due to unfortunate passing away of the instructor.

Expected Outcomes: Real World Problems

Students will demonstrate the ability to translate real-world problems into the language of mathematics.

Related typical general education outcomes:

4 Ability to Construct Arguments
5 Ability to Use Mathematical Methods
6 Ability to Solve Open-Ended Problems

Assessment methods

Method: Survey of Faculty

Faculty members were surveyed about students' performance in select upper-level courses required in special area. Our Applied Math program has three tracks: AMTH, ADSM, and ACTU. For AMTH, the faculty teaching Math 5000 Mathematical Modeling, Math 5670 Probability and Stochastic Processes, and Math 5630 Numerical Analysis were surveyed. For ADSM, the faculty teaching Math 3710 Discrete Mathematics, Math 5750 Graph Theory, and Math 5310 Algebra I were surveyed. For ACTU, the faculty teaching Math 5970 Actuarial Models, Stat 3600 Probability and Statistics I, and Math 5800 Actuarial Mathematics I were surveyed. Our target rate was 60%.

Findings:
According to the survey, for AMTH the weighted average is 73%; for ADSM, the weighted average is 85%; for ACTU the weighted average is 91%; with the combined average of 84% for all tracks.

How did you use findings for improvement?

Although the target was met for all tracks, we will continue to improve the performance related to this outcome. An considerable improvement has been made since last year from 56% to 73% this year in AMTH.

Additional comments:

The input in Math 5310 Abstract Algebra I could not be obtained due to unfortunate passing away of the instructor.