Program Name Mathematics, B.A.

Program Mission The Bachelors of Arts in Mathematics is designed to provide students the opportunity to pursue a broad, liberal education in mathematics. This versatile degree allows for interdisciplinary training and prepares students for careers in business, technology, education, government, the sciences, etc. In an increasingly mathematically oriented world, this degree would offer students analytical skills, training in quantitative thinking and creative problem-solving skills.

Referring to your annual assessment reports, please reflect on and report any changes or improvements you have made to your program as a result of evidence you have gathered

In reviewing the annual assessment report for the Bachelors in Arts in Mathematics program, we can see that students are learning foundational mathematics in courses such as Math 114, 221, 222, and 351. Students are also able to demonstrate college-level knowledge in algebra, analysis, and applied mathematics, which are all areas of advanced mathematics. As the Bachelors in Arts in Mathematics program is still in its infancy, there are few changes or improvements that are appropriate to make at this time. However, we plan to continue to carefully assess the program and make appropriate changes and improvements based on assessment results. In terms of our PLOs, we suggest combining Demonstrate college-level knowledge in algebra, Demonstrate college-level knowledge in analysis, and Demonstrate college-level knowledge in applied mathematics into Demonstrate college-level knowledge in a variety of areas of advanced mathematics. Additionally, we suggest as a new PLO: Exposure to college-level knowledge in fields related to mathematics. This would acknowledge the large cognate requirement of this program.

Curriculum

The curriculum provides more than one opportunity for students to meet the Program Learning Objectives

Which key courses and assignments does the program use to ensure that students are meeting these program learning outcomes?

MATH 114, 221,222,351,299, and upper division electives. Also, cognate courses.

Program Learning Outcomes to be Assessed

Program Mathematics, B.A.

Program Learning Outcome

1).Demonstrate college-level knowledge in foundational mathematics, e.g., Calculus and Linear Algebra

How will you collect and analyze the evidence that students are meeting the PLO (e.g. Review aggregate scores on embedded questions; review scores on standardized tests; use a rubric to score samples of student writing).

We will collect and analyze evidence that students are meeting the above PLOs for the Bachelors in Mathematics Program in the following ways: The evidence for PLOs 1 through 4 will be collected and analyzed through the review of a variety of data (e.g., overall scores, scores on five assessment indicators, and item information reports about the individual questions on the test) from the Educational Testing Service's Mathematics Major Field Test. The evidence for PLO 5 will be the satisfactory completion of the required cognate courses, which will be recorded and analyzed in the aggregate.

Where in the program does the evidence reside? Evidence can reside in a particular course, sections of a particular course, or outside of courses (e.g. survey of graduates)

The evidence resides in particular courses, namely Math 114, 221, 222, 299, 351, and the advanced electives the student chooses

Is the evidence direct or indirect Direct evidence is actual student outputs, which can be analyzed or aggregated using quantitative or qualitative methods. Indirect is secondary information, such as perceptions, attitudes, or self-ratings.

Direct-course (The Educational Testing Service's Mathematics Major Field Test with its associated metrics provides the assessment tool for PLOs 1 through 4. The tool for PLO 7 will consist of a cataloging of anonymous student achievement in the required c

What tools are necessary to collect evidence? (Rubics, Portfolio,Embedded Exam Questions etc.)

The Educational Testing Service's Mathematics Major Field Test with its associated metrics provides the assessment tool for PLOs 1 through 4. The tool for PLO 5 will consist of a cataloging of anonymous student achievement in the required cognate courses.

Are there benchmarks that you will use to interpret your results? Benchmarks are associated with quantitative evidence and can be determined based on disciplinary norms or previous results on the same assignment, survey, etc.

As an example of one benchmark, we will use past performance on the ETS Exam.

Program Mathematics, B.A.

Program Learning Outcome

2).Demonstrate competence in routine analytical reasoning

How will you collect and analyze the evidence that students are meeting the PLO (e.g. Review aggregate scores on embedded questions; review scores on standardized tests; use a rubric to score samples of student writing).

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As an example of one benchmark, we will use past performance on the ETS Exam.

Program Mathematics, B.A.

Program Learning Outcome

3).Demonstrate college-level knowledge in a variety of areas of advanced mathematics

How will you collect and analyze the evidence that students are meeting the PLO (e.g. Review aggregate scores on embedded questions; review scores on standardized tests; use a rubric to score samples of student writing).

We will collect and analyze evidence that students are meeting the above PLOs for the Bachelors in Mathematics Program in the following ways: The evidence for PLOs 1 through 4 will be collected and analyzed through the review of a variety of data (e.g., overall scores, scores on five assessment indicators, and item information reports about the individual questions on the test) from the Educational Testing Service's Mathematics Major Field Test. The evidence for PLO 5 will be the satisfactory completion of the required cognate courses, which will be recorded and analyzed in the aggregate.

Where in the program does the evidence reside? Evidence can reside in a particular course, sections of a particular course, or outside of courses (e.g. survey of graduates)

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Program Mathematics, B.A.

Program Learning Outcome

4).Demonstrate competence in non routine critical reasoning

How will you collect and analyze the evidence that students are meeting the PLO (e.g. Review aggregate scores on embedded questions; review scores on standardized tests; use a rubric to score samples of student writing).

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Where in the program does the evidence reside? Evidence can reside in a particular course, sections of a particular course, or outside of courses (e.g. survey of graduates)

The evidence resides in particular courses, namely Math 114, 221, 222, 299, 351, and the advanced electives the student chooses.

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As an example of one benchmark, we will use past performance on the ETS Exam.

Program Mathematics, B.A.

Program Learning Outcome

5) Exposure to college-level knowledge in fields related to mathematics

How will you collect and analyze the evidence that students are meeting the PLO (e.g. Review aggregate scores on embedded questions; review scores on standardized tests; use a rubric to score samples of student writing).

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Where in the program does the evidence reside? Evidence can reside in a particular course, sections of a particular course, or outside of courses (e.g. survey of graduates)

The evidence resides in particular courses, namely Math 114, 221, 222, 299, 351, and the advanced electives the student chooses. Also for this particular PLO in the choices of cognates.

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Program Mathematics, B.A.

Program Learning Outcome

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