

Organizational Area	Summary Results	2017-2018 Academic Year Data or 2017 Calendar Year Data - Action Plan Summary Results																																																																												
Indiana University System AMS » Indiana University: Kokomo » Academic Affairs » School of Sciences Mathematics	<p>Overall Statistics</p> <ul style="list-style-type: none"> • 9% (1/11) outcomes were included • 100% (1/1) of outcomes included have at least one measure specified • 100% (1/1) of outcomes included have measures with findings specified <table border="1"> <thead> <tr> <th colspan="2" data-bbox="531 487 1031 558">2 Total Measures (Includes measures that do not have findings)</th> <th colspan="2" data-bbox="1031 487 1530 558">2 Total Measures with Findings</th> </tr> <tr> <th colspan="2" data-bbox="531 558 783 594">Measure Type/Method</th> <th colspan="2" data-bbox="783 558 1031 594">Measure Level</th> <th colspan="2" data-bbox="1031 558 1530 594">Acceptable Target Achievement</th> </tr> </thead> <tbody> <tr> <td data-bbox="531 594 653 618">Student Artifact</td> <td data-bbox="653 594 783 618">0 (0%)</td> <td data-bbox="783 594 873 618">Course</td> <td data-bbox="873 594 1031 618">2 (100%)</td> <td data-bbox="1031 594 1121 618">Not Met</td> <td data-bbox="1121 594 1530 618">0 (0%)</td> </tr> <tr> <td data-bbox="531 618 653 643">Exam</td> <td data-bbox="653 618 783 643">2 (100%)</td> <td data-bbox="783 618 873 643">Program</td> <td data-bbox="873 618 1031 643">0 (0%)</td> <td data-bbox="1031 618 1121 643">Met</td> <td data-bbox="1121 618 1530 643">1 (50%)</td> </tr> <tr> <td data-bbox="531 643 653 667">Portfolio</td> <td data-bbox="653 643 783 667">0 (0%)</td> <td data-bbox="783 643 873 667">Institution</td> <td data-bbox="873 643 1031 667">0 (0%)</td> <td data-bbox="1031 643 1121 667">Exceeded</td> <td data-bbox="1121 643 1530 667">1 (50%)</td> </tr> <tr> <td data-bbox="531 667 653 691">Other</td> <td data-bbox="653 667 783 691">0 (0%)</td> <td data-bbox="783 667 873 691">Other</td> <td data-bbox="873 667 1031 691">0 (0%)</td> <td data-bbox="1031 667 1121 691">Unspecified</td> <td data-bbox="1121 667 1530 691">0 (0%)</td> </tr> <tr> <td data-bbox="531 691 653 716">Total Direct</td> <td data-bbox="653 691 783 716">2 (100%)</td> <td data-bbox="783 691 873 716">Unspecified</td> <td data-bbox="873 691 1031 716">0 (0%)</td> <td colspan="2"></td> </tr> <tr> <td data-bbox="531 716 653 740">Survey</td> <td data-bbox="653 716 783 740">0 (0%)</td> <td colspan="4"></td> </tr> <tr> <td data-bbox="531 740 653 764">Focus Group</td> <td data-bbox="653 740 783 764">0 (0%)</td> <td colspan="4"></td> </tr> <tr> <td data-bbox="531 764 653 789">Interview</td> <td data-bbox="653 764 783 789">0 (0%)</td> <td colspan="4"></td> </tr> <tr> <td data-bbox="531 789 653 813">Other</td> <td data-bbox="653 789 783 813">0 (0%)</td> <td colspan="4"></td> </tr> <tr> <td data-bbox="531 813 653 837">Total Indirect</td> <td data-bbox="653 813 783 837">0 (0%)</td> <td colspan="4"></td> </tr> <tr> <td data-bbox="531 837 653 862">Unspecified</td> <td data-bbox="653 837 783 862">0 (0%)</td> <td colspan="4"></td> </tr> </tbody> </table>	2 Total Measures (Includes measures that do not have findings)		2 Total Measures with Findings		Measure Type/Method		Measure Level		Acceptable Target Achievement		Student Artifact	0 (0%)	Course	2 (100%)	Not Met	0 (0%)	Exam	2 (100%)	Program	0 (0%)	Met	1 (50%)	Portfolio	0 (0%)	Institution	0 (0%)	Exceeded	1 (50%)	Other	0 (0%)	Other	0 (0%)	Unspecified	0 (0%)	Total Direct	2 (100%)	Unspecified	0 (0%)			Survey	0 (0%)					Focus Group	0 (0%)					Interview	0 (0%)					Other	0 (0%)					Total Indirect	0 (0%)					Unspecified	0 (0%)					<p>0 Total Actions with Status Report</p> <p><i>No Status Reports have been specified</i></p>
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Report : Assessment Cycle Details for : Mathematics

Report Generated by Taskstream

Workspace : Academic Program Assessment and Planning Workspace

Assessment Plan: 2018-2019 Assessment Cycle: Assessment Plan and Assessment Findings

Assessment Plan Template : IU Kokomo Academic Assessment Template

Report Generated : Thursday, May 02, 2019

Measures and Findings

Mathematics Outcome Set

Outcome

Outcome 1.2 Counterexamples

Students will be able to disprove mathematical assertions, by constructing counterexamples.

Mapped to:

No Mapping

Measure

M347 Final Exams

COURSE LEVEL; DIRECT - EXAM

Details/Description:

This class partially serves as an introduction to proofs course, although it is currently offered only every other year. It is taken by math majors, secondary education majors, and some math minors. For many students, it is the first course where they learn to write counterexamples.

This class was offered in Fall 2017 with 8 students enrolled. There were two relevant problems on the final exam requesting that students construct counterexamples.

Student responses were determined to be exemplary (E) if a correct counterexample was given along with explanation, acceptable (A) if a correct counterexample was given without correct explanation, revision needed (R) if an attempt was made but there were errors, or not assessable (N).

Acceptable Target:

A student's construction of counter examples was deemed acceptable if at least one of the two counterexamples were at the E or A level. At least 75% of students should be constructing counterexamples at an acceptable level.

Implementation Plan (timeline):

Key/Responsible Personnel:

Supporting Attachments:

Findings

for M347 Final Exams

Summary of Findings:

Of the eight students in the class, 75% of students (6 students), were judged to be constructing counter examples with an acceptable level of proficiency. One student submitted incorrect work, and one student skipped both relevant questions.

Acceptable Target Achievement:

Met

Reflections/Notes:

Substantiating Evidence:

Action

in 2017-2018 Academic Year Data or 2017 Calendar Year Data - Action Plan

Continued inclusion of counterexamples in Math M347

Action details:

The findings in this report were discussed among math faculty. Since our findings were satisfactory, we do not plan significant changes at this time. We will continue to include a focus on counter examples as part of the introduction to proofs content in MATH-M347. Ideally, an introduction to proofs course would be taken by math majors in their second year. Our intention is for M347 to serve this purpose. Unfortunately, it is only offered alternating fall semesters, so some students are not able to take it until later in the program. Low enrollment in upper level math courses has prevented us from offering the course more frequently thus far.

Implementation Plan

(timeline):

Key/Responsible

Personnel:

No Status Added to Continued inclusion of counterexamples in Math M347

Measures:

Supporting Attachments:

Measure

M404 Midterm Exam

COURSE LEVEL; DIRECT - EXAM

Details/Description:

This course was offered as an independent study in Spring 2018 for a math major in his junior year. There were three relevant problems on the midterm exam requesting that the student construct counterexamples. (No relevant questions were on the final exam, so it was not included for assessment.)

The exam instructions specified that justification was not required, so explanation of counterexamples was not evaluated. Student responses were determined to be exemplary (E) if a correct counterexample was given along with explanation, acceptable (A) if a correct counterexample was given without correct explanation, revision needed (R) if an attempt was made but there were errors, or not assessable (N).

Acceptable Target:

A student's construction of counter examples was deemed acceptable if at least two of the three counterexamples were at the E or A level. There was only one student in this class.

Implementation Plan (timeline):

Key/Responsible Personnel:

Supporting Attachments:

Findings

for M404 Midterm Exam

Summary of Findings:

The student constructed correct counterexamples for all three questions.

Acceptable Target Achievement:

Exceeded

Reflections/Notes:

Substantiating Evidence:

Action

in 2017-2018 Academic Year Data or 2017 Calendar Year Data - Action Plan

Continued inclusion of

No Status Added to Continued inclusion of

**counterexamples in
Math M347**

counterexamples in Math M347

Action details:

The findings in this report were discussed among math faculty. Since our findings were satisfactory, we do not plan significant changes at this time. We will continue to include a focus on counter examples as part of the introduction to proofs content in MATH-M347. Ideally, an introduction to proofs course would be taken by math majors in their second year. Our intention is for M347 to serve this purpose. Unfortunately, it is only offered alternating fall semesters, so some students are not able to take it until later in the program. Low enrollment in upper level math courses has prevented us from offering the course more frequently thus far.

**Implementation Plan
(timeline):**

Key/Responsible

Personnel:

Measures:

Supporting Attachments: