

Organizational Area	Summary Results	2021-2022 Reporting Year   2020-2021 Data - Action Plan Summary Results																																																								
Indiana University System AMS » Indiana University: Kokomo » Academic Affairs » School of Sciences <b>Mathematics</b>	<p><b>Overall Statistics</b></p> <ul style="list-style-type: none"> <li>• <b>18%</b> (2/11) outcomes were included</li> <li>• <b>100%</b> (2/2) of outcomes included have at least one measure specified</li> <li>• <b>100%</b> (2/2) of outcomes included have measures with findings specified</li> </ul> <table border="1" data-bbox="541 487 1543 893"> <thead> <tr> <th colspan="2">8 Total Measures (Includes measures that do not have findings)</th> <th colspan="2">8 Total Measures with Findings</th> </tr> <tr> <th>Measure Type/Method</th> <th>Measure Level</th> <th colspan="2">Acceptable Target Achievement</th> </tr> </thead> <tbody> <tr> <td>Student</td> <td>0 (0%)</td> <td>Not Met</td> <td>4 (50%)</td> </tr> <tr> <td>Artifact</td> <td>0 (0%)</td> <td>Met</td> <td>2 (25%)</td> </tr> <tr> <td>Exam</td> <td>8 (100%)</td> <td>Exceeded</td> <td>0 (0%)</td> </tr> <tr> <td>Portfolio</td> <td>0 (0%)</td> <td>Unspecified</td> <td>2 (25%)</td> </tr> <tr> <td>Other</td> <td>0 (0%)</td> <td></td> <td></td> </tr> <tr> <td><b>Total Direct</b></td> <td><b>8 (100%)</b></td> <td></td> <td></td> </tr> <tr> <td>Survey</td> <td>0 (0%)</td> <td></td> <td></td> </tr> <tr> <td>Focus Group</td> <td>0 (0%)</td> <td></td> <td></td> </tr> <tr> <td>Interview</td> <td>0 (0%)</td> <td></td> <td></td> </tr> <tr> <td>Other</td> <td>0 (0%)</td> <td></td> <td></td> </tr> <tr> <td><b>Total Indirect</b></td> <td><b>0 (0%)</b></td> <td></td> <td></td> </tr> <tr> <td><b>Unspecified</b></td> <td><b>0 (0%)</b></td> <td></td> <td></td> </tr> </tbody> </table>	8 Total Measures (Includes measures that do not have findings)		8 Total Measures with Findings		Measure Type/Method	Measure Level	Acceptable Target Achievement		Student	0 (0%)	Not Met	4 (50%)	Artifact	0 (0%)	Met	2 (25%)	Exam	8 (100%)	Exceeded	0 (0%)	Portfolio	0 (0%)	Unspecified	2 (25%)	Other	0 (0%)			<b>Total Direct</b>	<b>8 (100%)</b>			Survey	0 (0%)			Focus Group	0 (0%)			Interview	0 (0%)			Other	0 (0%)			<b>Total Indirect</b>	<b>0 (0%)</b>			<b>Unspecified</b>	<b>0 (0%)</b>			<p><b>0 Total Actions with Status Report</b></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: 2021-2022 Assessment Cycle: Assessment Plan and Assessment Findings

Assessment Plan Template : IU Kokomo Academic Assessment Template

Report Generated : Wednesday, October 26, 2022

## Measures and Findings

### *Learning Outcomes 2020-2025*

#### ❖ Goal 4

Communicate mathematical ideas clearly and effectively.

#### Outcome 4.1

*Students will be able to express their mathematics clearly in both written and oral form.*

#### Mapped to:

*No Mapping*

#### *Measure*

*M216 Final Exam*

COURSE LEVEL; DIRECT - EXAM

#### Details/Description:

This course is taken by many students with a science major including mathematics. This course was offered in Fall 2020 to a total of 11 students, none of whom were mathematics majors.

Since no mathematics majors were enrolled in this course, there was no assessment activity for this semester.

#### Acceptable Target:

A student's ability to express mathematics clearly was deemed acceptable if at least 3 out of 4 problems scored at the E or A level. At least 75% of students should be expressing their mathematics clearly.

#### Implementation Plan (timeline):

#### Key/Responsible Personnel:

#### Supporting Attachments:

#### *Findings*

*for M216 Final Exam*

#### Summary of Findings:

No findings are available for this outcome since no mathematics majors were enrolled in the course this semester.

#### Acceptable Target Achievement:

**Reflections/Notes:**

**Substantiating Evidence:**

***Measure***

*M413 Final Exam*

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**COURSE LEVEL; DIRECT - EXAM**

**Details/Description:**

This course is typically taken by senior mathematics majors to fulfill one sequence requirement at the 400 level. This course was offered in Fall 2020 to six total students, all of whom were mathematics majors.

Four problems (2d, 6, 7a, 9) from the final exam were chosen to evaluate.

Student responses were determined to be exemplary (E) if the selected problems had no errors, acceptable (A) if the problem was mostly correct with a few minor errors, revision needed (R ) if an attempt was made but there were significant errors, or not assessable (N).

**Acceptable Target:**

A student's ability to express mathematics clearly was deemed acceptable if at least 3 out of 4 problems scored at the E or A level. At least 75% of students should be expressing their mathematics clearly.

**Implementation Plan (timeline):**

**Key/Responsible Personnel:**

**Supporting Attachments:**

***Findings***

*for M413 Final Exam*

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**Summary of Findings:**

Out of the six students in the course, five took the final exam. Out of those five students, two received a rating of E or A on at least three of the selected questions. This represents 40% of the students who completed the exam.

**Acceptable Target Achievement:**

Not Met

**Reflections/Notes:**

These particular questions will be reviewed by the faculty to determine if they are appropriate assessment questions.

**Substantiating Evidence:**

***Action***

*in 2021-2022 Reporting Year | 2020-2021 Data - Action Plan*

**Review of Assessment Questions**

*No Status Added to Review of Assessment Questions*

**Action details:**

Since the number of students is small in all these courses, a thorough review of the questions used for assessment should be sufficient for meeting assessment targets in the future.

**Implementation Plan (timeline)^:**

**Key/Responsible**

**Personnel:**

**Measures:**

**Supporting Attachments:**

**Measure**

*M414 Final Exam*

**COURSE LEVEL; DIRECT - EXAM**

**Details/Description:**

This course is taken by mathematics majors during their final semester to complete one of the 400 level course sequences required. This course was offered in Spring 2021 to a total of four students.

Four questions from the final exam (1, 3, 4, 6b) were chosen for evaluation.

Student responses were determined to be exemplary (E) if the selected problem had no errors, acceptable (A) if the problem was mostly correct with a few minor errors, revision needed (R ) if an attempt was made but there were significant errors, or not assessable (N).

**Acceptable Target:**

A student's ability to express mathematics clearly was deemed acceptable if at least 3 out of 4 problems scored at the E or A level. At least 75% of students should be expressing their mathematics clearly.

**Implementation Plan (timeline):**

**Key/Responsible Personnel:**

**Supporting Attachments:**

**Findings**

*for M414 Final Exam*

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**Summary of Findings:**

Of the four students who completed the final exam, two received scores of E or A on at least three of the selected questions. This represents 50% of the students meeting assessment target.

**Acceptable Target Achievement:**

Not Met

**Reflections/Notes:**

Due to the low class size, the deficit between the percentage of students meeting the assessment target and acceptable target achievement is one student. The faculty will review the chosen questions to determine if they are appropriate for assessing this outcome.

**Substantiating Evidence:**

***Action***

*in 2021-2022 Reporting Year | 2020-2021 Data - Action Plan*

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***Review of Assessment Questions***

*No Status Added to Review of Assessment Questions*

**Action details:**

Since the number of students is small in all these courses, a thorough review of the questions used for assessment should be sufficient for meeting assessment targets in the future.

**Implementation Plan (timeline)^:**

**Key/Responsible**

**Personnel:**

**Measures:**

**Supporting Attachments:**

***Measure***

*T336 Final Exam*

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**COURSE LEVEL; DIRECT - EXAM**

**Details/Description:**

This class is typically taken by both mathematics majors and secondary math education majors in order to fulfill a 300 level course requirement. This course was offered in Spring 2021 to a total of six students.

Four questions (3, 6, 10, 11) from the final exam were chosen for evaluation.

Student responses were determined to be exemplary (E) if the selected problem had no errors, acceptable (A) if the problem was mostly correct with a few minor errors, revision needed (R ) if an attempt was made but there were significant errors, or not assessable (N).

**Acceptable Target:**

A student's ability to express mathematics clearly was deemed acceptable if at least 3 out of 4 problems scored at the E or A level. At least 75% of students should be expressing their mathematics clearly.

**Implementation Plan (timeline):**

**Key/Responsible Personnel:**

**Supporting Attachments:**

***Findings***  
*for T336 Final Exam*

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**Summary of Findings:**

Out of the three mathematics majors who took the final exam, two received a score of E or A on at least three of the selected questions. This represents 67% of the students.

**Acceptable Target Achievement:**

Not Met

**Reflections/Notes:**

While the outcome did not meet the acceptable target achievement, this would have been impossible unless all three students succeeded. The student who did not meet the assessment target missed by a single question. The faculty will review these questions to determine if they are appropriate for assessment of this outcome.

**Substantiating Evidence:**

***Action***  
*in 2021-2022 Reporting Year | 2020-2021 Data - Action Plan*

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***Review of Assessment Questions***

**Action details:**  
Since the number of students is small in all these courses, a thorough review of the questions used for assessment

*No Status Added to Review of Assessment Questions*

should be sufficient for meeting assessment targets in the future.

**Implementation Plan (timeline)^:**

**Key/Responsible Personnel:**

**Measures:**

**Supporting Attachments:**

## Outcome 4.2

*Students use correct mathematical vocabulary and mathematical notation.*

### Mapped to:

*No Mapping*

## Measure

*M215 Final Exam*

**COURSE LEVEL; DIRECT - EXAM**

### Details/Description:

This course is taken by many students with any science major. The course was offered in Spring 2021 to a total of 31 students, one of whom was a mathematics major. This student did not complete the course therefore no assessment activities were performed this semester.

### Acceptable Target:

A student's ability to express mathematics clearly was deemed acceptable if at least 3 out of 4 problems scored at the E or A level. At least 75% of students should be expressing their mathematics clearly.

### Implementation Plan (timeline):

### Key/Responsible Personnel:

### Supporting Attachments:

## Findings

*for M215 Final Exam*

### Summary of Findings:

Since no mathematics majors completed this course, there are no findings for this outcome.

### Acceptable Target Achievement:

### Reflections/Notes:

### Substantiating Evidence:

## ***Measure***

### *M413 Final Exam*

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#### **COURSE LEVEL; DIRECT - EXAM**

#### **Details/Description:**

This course is typically taken by senior mathematics majors to fulfill one sequence requirement at the 400 level. This course was offered in Fall 2020 to six total students, all of whom were mathematics majors.

Four problems (1, 2b, 3, 4) from the final exam were chosen to evaluate.

Student responses were determined to be exemplary (E) if the selected problems had no errors, acceptable (A) if the problem was mostly correct with a few minor errors, revision needed (R) if an attempt was made but there were significant errors, or not assessable (N).

#### **Acceptable Target:**

A student's ability to express mathematics clearly was deemed acceptable if at least 3 out of 4 problems scored at the E or A level. At least 75% of students should be expressing their mathematics clearly.

#### **Implementation Plan (timeline):**

#### **Key/Responsible Personnel:**

#### **Supporting Attachments:**

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## ***Findings***

### *for M413 Final Exam*

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#### **Summary of Findings:**

Out of the five students who completed the final exam, three received a score of E or A on at least three of the chosen questions. This represents 60% of the students.

#### **Acceptable Target Achievement:**

Not Met

#### **Reflections/Notes:**

For this course, one question would change the result of the assessment from not meeting the target to meeting the target. The faculty will be reviewing the chosen questions.

#### **Substantiating Evidence:**

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## ***Action***

### *in 2021-2022 Reporting Year | 2020-2021 Data - Action Plan*

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#### ***Review of Assessment Questions***

*No Status Added to Review of Assessment  
Questions*



**Action details:**

Since the number of students assessed is small for all of these courses, a thorough review of the assessment questions should reveal why the two courses which were successful were successful and how these findings can be transferred to M413 to improve success in the future.

**Implementation Plan  
(timeline)^:****Key/Responsible****Personnel:****Measures:****Supporting Attachments:*****Measure******M414 Final Exam***

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**COURSE LEVEL; DIRECT - EXAM****Details/Description:**

This course is taken by mathematics majors during their final semester to complete one of the 400 level course sequences required. This course was offered in Spring 2021 to a total of four students.

Four questions from the final exam (3, 4, 5, 6a) were chosen for evaluation.

Student responses were determined to be exemplary (E) if the selected problem had no errors, acceptable (A) if the problem was mostly correct with a few minor errors, revision needed (R ) if an attempt was made but there were significant errors, or not assessable (N).

**Acceptable Target:**

A student's ability to express mathematics clearly was deemed acceptable if at least 3 out of 4 problems scored at the E or A level. At least 75% of students should be expressing their mathematics clearly.

**Implementation Plan (timeline):****Key/Responsible Personnel:****Supporting Attachments:*****Findings***

*for M414 Final Exam*

---

**Summary of Findings:**

Out of the four students who completed the final exam, three received a score of E or A on at least three of the chosen questions. This represents 75% of the students.

**Acceptable Target Achievement:**

Met

**Reflections/Notes:**

One question would change the result from 75% to 100% so the faculty will work together to ensure that all students are fully prepared for the final exam and given multiple attempts to demonstrate their abilities.

**Substantiating Evidence:**

***Action***

*in 2021-2022 Reporting Year | 2020-2021 Data - Action Plan*

---

***Review of Assessment Questions***

**Action details:**

Since the number of students assessed is small for all of these courses, a thorough review of the assessment questions should reveal why the two courses which were successful were successful and how these findings can be transferred to M413 to improve success in the future.

**Implementation Plan (timeline)^:**

**Key/Responsible**

**Personnel:**

**Measures:**

**Supporting Attachments:**

*No Status Added to Review of Assessment Questions*

***Measure***

*T336 Final Exam*

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COURSE LEVEL; DIRECT - EXAM

**Details/Description:**

This class is typically taken by both mathematics majors and secondary math education majors in order to fulfill a 300 level course requirement. This course was offered in Spring 2021 to a total of six students.

Four questions (2, 5, 9, 12) from the final exam were chosen for evaluation.

Student responses were determined to be exemplary (E) if the selected problem had no errors, acceptable (A) if the problem was mostly correct with a few minor errors, revision needed (R ) if an attempt was made but there were significant errors, or not assessable (N).

**Acceptable Target:**

A student's ability to express mathematics clearly was deemed acceptable if at least 3 out of 4 problems scored at the E or A level. At least 75% of students should be expressing their mathematics clearly.

**Implementation Plan (timeline):**

**Key/Responsible Personnel:**

**Supporting Attachments:**

***Findings***  
*for T336 Final Exam*

**Summary of Findings:**

Out of the three mathematics majors who completed the final exam, all three received a score of E or A on at least three of the chosen questions. This represents 100% of the students.

**Acceptable Target Achievement:**

Met

**Reflections/Notes:**

These questions will be reviewed by the faculty in order to ensure that they are appropriate measures for this outcome.

**Substantiating Evidence:**

***Action***  
*in 2021-2022 Reporting Year | 2020-2021 Data - Action Plan*

***Review of Assessment Questions***

**Action details:**  
Since the number of students assessed is small for all of these courses, a thorough review of the assessment

*No Status Added to Review of Assessment Questions*

questions should reveal why the two courses which were successful were successful and how these findings can be transferred to M413 to improve success in the future.

**Implementation Plan  
(timeline)^:**

**Key/Responsible  
Personnel:**

**Measures:**

**Supporting Attachments:**