



Program Assessment Plan Matrix

Program Unit or Department: Mathematics
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Contact Person: John Noonan
 Phone Contact: 740-397-9000 ext. 3221
 Email Contact: jnoonan@mvnu.edu

Student Learning Outcomes	Assessment Methodology	Target	Summary of Major Findings	Actions Taken to Improve Student Learning	Timeframe																						
<p>SLO 1: Analyze problems and formulate appropriate mathematical models in a variety of areas of Mathematics.</p>	<p>Method 1: MFT</p>	<p>Our cohorts will score above the 30th percentile in non-routine and routine problems</p>	<p>Findings Method 1:</p> <table border="1" data-bbox="921 407 1499 756"> <thead> <tr> <th rowspan="2">Cohort</th> <th rowspan="2">Number</th> <th colspan="2">Subscores (with national percentile)</th> </tr> <tr> <th>Routine</th> <th>Nonroutine</th> </tr> </thead> <tbody> <tr> <td>2017</td> <td>5</td> <td>23(10%)</td> <td>19(7%)</td> </tr> <tr> <td>2016</td> <td>9</td> <td>25(17%)</td> <td>28(58%)</td> </tr> <tr> <td>2015</td> <td>11</td> <td>20(4%)</td> <td>26(42%)</td> </tr> <tr> <td>2013-2014</td> <td>7</td> <td>20 (4%)</td> <td>19 (7%)</td> </tr> </tbody> </table> <p>During the past 5 years our students have not met the target in any cohort.</p>	Cohort	Number	Subscores (with national percentile)		Routine	Nonroutine	2017	5	23(10%)	19(7%)	2016	9	25(17%)	28(58%)	2015	11	20(4%)	26(42%)	2013-2014	7	20 (4%)	19 (7%)	<p>The department is reworking the curriculum to include a capstone course.</p>	<p>1-2 years</p>
	Cohort	Number	Subscores (with national percentile)																								
Routine			Nonroutine																								
2017	5	23(10%)	19(7%)																								
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<p>Method 2: Statistics Project</p>	<p>70% of the groups score above 70% using the standard rubric developed for this project</p>	<p>Findings Method 2: New/no data</p>																									
<p>SLO 2: Select and utilize appropriate mathematical technology with which to analyze mathematical problems in a wide variety of areas.</p>	<p>Method 1: Tech writing final paper</p>	<p>70% of the students score above 70% using the standard rubric developed for this project</p>	<p>Findings Method 1: New/no data</p>																								

	Method 2: Statistics Project	70% of the groups score above 70% using the standard rubric developed for this project	Findings Method 2: New/ no data																	
SLO 3: Make rigorous mathematical arguments including how to both prove and disprove conjectures.	Method 1: Number theory take home portion of the final exam	70% of the students score above 70% on this assessment	Findings Method 1: New/no data																	
	Method 2: Modern Algebra final exam	70% of the students score above 70% on this assessment	Findings Method 2: New/ no data																	
SLO 4: Use the concepts of Calculus in solving problems. The fundamental concepts include sets, numbers, functions, and convergence.	Method 1: MFT	Our cohorts will score above the 30 th percentile in calculus	Findings Method 1: <table border="1" data-bbox="1016 670 1409 992"> <thead> <tr> <th>Cohort</th> <th>Number</th> <th>Calculus</th> </tr> </thead> <tbody> <tr> <td>2017</td> <td>5</td> <td>21(7%)</td> </tr> <tr> <td>2016</td> <td>9</td> <td>27(28%)</td> </tr> <tr> <td>2015</td> <td>11</td> <td>21 (7%)</td> </tr> <tr> <td>2013-2014</td> <td>7</td> <td>21 (7%)</td> </tr> </tbody> </table> During the past 5 years our students have not met the target in any cohort.	Cohort	Number	Calculus	2017	5	21(7%)	2016	9	27(28%)	2015	11	21 (7%)	2013-2014	7	21 (7%)	The calculus sequence is being re-evaluated. The department plans to make proposals for revising the sequence as well as the entire mathematics curriculum.	1-2 years
	Cohort	Number	Calculus																	
2017	5	21(7%)																		
2016	9	27(28%)																		
2015	11	21 (7%)																		
2013-2014	7	21 (7%)																		
Method 2: Pre/post calculus exam given to incoming majors and seniors.	New/Under development	Findings Method 2: New/ under development																		

<p>SLO 5: Use the concepts of Algebra in solving problems. The fundamental concepts include equations, numbers, and algebraic structures.</p>	<p>Method 1: MFT</p>	<p>Our cohorts will score above the 30th percentile in algebra</p>	<p>Findings Method 1:</p> <table border="1" data-bbox="1014 134 1409 459"> <thead> <tr> <th>Cohort</th> <th>Number</th> <th>Algebra</th> </tr> </thead> <tbody> <tr> <td>2017</td> <td>5</td> <td>35(57%)</td> </tr> <tr> <td>2016</td> <td>9</td> <td>33(45%)</td> </tr> <tr> <td>2015</td> <td>11</td> <td>25 (8%)</td> </tr> <tr> <td>2013-2014</td> <td>7</td> <td>20 (1%)</td> </tr> </tbody> </table> <p>Our cohorts have improved their algebra subscores in the past two years.</p>	Cohort	Number	Algebra	2017	5	35(57%)	2016	9	33(45%)	2015	11	25 (8%)	2013-2014	7	20 (1%)	<p>The department would like to continue this trend by including an emphasis on algebra throughout the curriculum.</p>	<p>1-2 years</p>
	Cohort	Number	Algebra																	
2017	5	35(57%)																		
2016	9	33(45%)																		
2015	11	25 (8%)																		
2013-2014	7	20 (1%)																		
<p>Method 2: Modern Algebra final exam</p>	<p>70% of the students score above 70% on this assessment</p>	<p>Findings Method 2: New/Under development</p>																		
<p>SLO 6: Use the concepts of Statistics in data analysis and inference. The fundamental concepts include sampling, graphing, risk, probability, and hypothesis testing.</p>	<p>Method 1: Probability Final Exam</p>	<p>70% of the students score above 70% on this assessment</p>	<p>Findings Method 1: New/ no data</p>																	
	<p>Method 2: Statistics Project</p>	<p>70% of the groups score above 70% using the standard rubric developed for this project</p>	<p>Findings Method 2: New/Under development</p>																	
<p>SLO 7: Express themselves in writing and orally in an articulate, sound, and well-organized fashion.</p>	<p>Method 1: Tech writing final paper</p>	<p>70% of the students score above 70% on this assessment</p>	<p>Findings Method 1: New/Under development</p>																	
	<p>Method 2: Math History Presentation</p>	<p>70% of the students score above 70% on this assessment</p>	<p>Findings Method 2: New/Under development</p>																	