

Assessment: Course Four Column



Courses (MATH) - Math

MATH 128:Precalculus and Trigonometry

<i>Course Outcomes</i>	<i>Assessment Measures</i>	<i>Results</i>	<i>Actions</i>
<p>Graph and analyze - Graph and analyze parametric equations, trigonometric functions, conic sections, vectors, and polar equations and convert between the Cartesian and polar coordinate systems</p> <p>Course Outcome Status: Active</p> <p>Next Assessment: 2020-2021</p> <p>Start Date: 06/20/2016</p>	<p>Exam - Problems #23, 24, and 25 on the final exam</p> <p>Criterion: 70% of the students achieve 100% on the problems</p>	<p>Reporting Period: 2016-2017</p> <p>Criterion Met: Yes</p> <p>80, 100, 80 % of the students on the problem, #23, 24, and 25 answered correctly. (10/23/2017)</p>	
<p>Vectors and use vectors to solve real-world problems - Perform operations with vectors and use vectors to solve real-world problems</p> <p>Course Outcome Status: Active</p> <p>Next Assessment: 2020-2021</p> <p>Start Date: 06/20/2016</p>	<p>Exam - Exam Ch 7 & 8</p> <p>Quiz Ch 7</p> <p>Quiz Ch 8</p> <p>Criterion: Students need to achieve at least 70 % on each assessment measure.</p>	<p>Reporting Period: 2016-2017</p> <p>Criterion Met: No</p> <p>Overall achievement was 58.5 % for Exam Ch 7 & 8, 88.6 % for Quiz Ch 7, and 89.4 % for Quiz Ch 8. (10/23/2017)</p>	<p>Action: The identified weakness on this learning outcome was on performing vector operations and finding dot products. More in-class discussion and homework assignment will be needed. (10/23/2017)</p>
<p>Trigonometric equations and right or oblique triangles - Solve trigonometric equations and right or oblique triangles</p> <p>Course Outcome Status: Active</p> <p>Next Assessment: 2020-2021</p> <p>Start Date: 06/13/2016</p>	<p>Exam - Exam Ch 5 & 6</p> <p>Quiz Ch 5</p> <p>Quiz Ch 6</p> <p>Criterion: Students need to achieve at least 70 % on each assessment measure.</p>	<p>Reporting Period: 2016-2017</p> <p>Criterion Met: Yes</p> <p>Overall achievement was 79.3, 77.1, 85.3 % for Exam Ch 5 & 6, Quiz Ch 5, and Quiz Ch 6 respectively. (10/23/2017)</p>	
<p>Complex numbers in trigonometric form and perform operations -</p>	<p>Exam - Exam Ch 7 & 8</p> <p>Quiz Ch 7</p>	<p>Reporting Period: 2016-2017</p> <p>Criterion Met: Yes</p>	

<i>Course Outcomes</i>	<i>Assessment Measures</i>	<i>Results</i>	<i>Actions</i>
Express complex numbers in trigonometric form and perform operations with them Course Outcome Status: Active Next Assessment: 2020-2021 Start Date: 06/20/2016	Quiz Ch 8 Criterion: Students need to achieve at least 70 % on each assessment measure.	Overall achievement was 58.5 % for Exam Ch 7 & 8, 88.6 % for Quiz Ch 7, and 89.4 % for Quiz Ch 8. (10/23/2017)	
Manipulate complex numbers - Manipulate complex numbers, understanding their relationship to the solutions of polynomial and rational equations. Course Outcome Status: Active Next Assessment: 2021-2022 Start Date: 10/23/2017	Exam - Exam Ch 1 & 2 Quiz Ch 1 Quiz Ch 2 Criterion: Students need to achieve at least 70 % on each assessment measure.	Reporting Period: 2016-2017 Criterion Met: Yes Overall achievement was 83.6, 77.8 and 72.6 % for Exam Ch 1 & 2, Quiz Ch 1, and Quiz Ch 2 respectively. (10/23/2017)	Action: Three subtopics; add or subtract complex numbers, multiply complex numbers, and simplify powers of i , were tested on the exam ch 1 & 2. Students showed weakness on multiplying complex numbers although overall performance was satisfactory. In the future, more discussion will be needed on multiplying complex numbers. (10/23/2017)
Distinguish and obtain the equations of circles and parabolas. - Distinguish and obtain the equations of circles and parabolas. Course Outcome Status: Active Next Assessment: 2021-2022 Start Date: 10/23/2017	Exam - Exam Ch 1 & 2 Quiz Ch 1 Quiz Ch 2 Criterion: Students need to achieve at least 70 % on each assessment measure.	Reporting Period: 2016-2017 Criterion Met: Yes Overall achievement was 83.6, 77.8 and 72.6 % for Exam Ch 1 & 2, Quiz Ch 1, and Quiz Ch 2 respectively. (10/23/2017)	Action: Students showed weakness in finding equation of circles and graphing it. I will plan more time and lecture for this part in upcoming semester. (10/23/2017)
Operate on functions, including composition and inversion - Operate on functions, including composition and inversion Course Outcome Status: Active Next Assessment: 2021-2022 Start Date: 10/23/2017	Exam - Exam Ch 1 & 2 Quiz Ch 1 Quiz Ch 2 Criterion: Students need to achieve at least 70 % on each assessment measure.	Reporting Period: 2016-2017 Criterion Met: Yes Overall achievement was 83.6, 77.8 and 72.6 % for Exam Ch 1 & 2, Quiz Ch 1, and Quiz Ch 2 respectively. (10/23/2017)	
Solve a variety of equations (polynomial, exponential, logarithmic) - Solve a variety of equations (polynomial, exponential, logarithmic) Course Outcome Status: Active Next Assessment: 2021-2022	Exam - Exam Ch 3 & 4 Quiz Ch 3 Quiz Ch 4 Criterion: Students need to achieve at least 70 % on each assessment measure.	Reporting Period: 2016-2017 Criterion Met: Yes Overall achievement was 70.8, 84.3, and 70.6 for Exam Ch 3 & 4, Quiz Ch 3, and Quiz Ch 4 respectively. (10/23/2017)	Action: Students showed excellent performance on this learning outcome. However, students needed more practice in solving Logarithmic equation. (10/23/2017)

<i>Course Outcomes</i>	<i>Assessment Measures</i>	<i>Results</i>	<i>Actions</i>
Start Date: 10/23/2017			
<p>Graph a variety of functions including logarithmic, polynomial, rational, and exponential functions - Graph a variety of functions including logarithmic, polynomial, rational, and exponential functions. Course Outcome Status: Active Next Assessment: 2021-2022 Start Date: 10/23/2017</p>	<p>Exam - Exam Ch 3 & 4 Quiz Ch 3 Quiz Ch 4 Criterion: Students need to achieve at least 70 % on each assessment measure.</p>	<p>Reporting Period: 2016-2017 Criterion Met: Yes Overall achievement was 70.8, 84.3, and 70.6 for Exam Ch 3 & 4, Quiz Ch 3, and Quiz Ch 4 respectively (10/23/2017)</p>	<p>Action: Although students' performance was satisfactory according to the exam, students performance showed weakness in finding center radius form of equation of circle and graphing it, and graphing piecewise –defined functions. More discussion will need in the future for this part. (10/23/2017)</p>
<p>Analyze functions by finding roots, turning points, and asymptotes - Analyze functions by finding roots, turning points, and asymptotes. Course Outcome Status: Active Next Assessment: 2021-2022 Start Date: 10/23/2017</p>	<p>Exam - Exam Ch 3 & 4 Quiz Ch 3 Quiz Ch 4 Criterion: Students need to achieve at least 70 % on each assessment measure.</p>	<p>Reporting Period: 2016-2017 Criterion Met: Yes Overall achievement was 70.8, 84.3, and 70.6 for Exam Ch 3 & 4, Quiz Ch 3, and Quiz Ch 4 respectively. (10/23/2017)</p>	<p>Action: Although the overall performance was satisfactory on this learning outcome, students showed less competency on understanding the relation among various ways of finding roots. More exercise and discuss will be needed in the future. (10/23/2017)</p>
<p>Properties of logarithms competently - Use the properties of logarithms competently. Course Outcome Status: Active Next Assessment: 2021-2022 Start Date: 10/23/2017</p>	<p>Exam - Exam Ch 3 & 4 Quiz Ch 3 Quiz Ch 4 Criterion: Students need to achieve at least 70 % on each assessment measure.</p>	<p>Reporting Period: 2016-2017 Criterion Met: Yes Overall achievement was 70.8, 84.3, and 70.6 for Exam Ch 3 & 4, Quiz Ch 3, and Quiz Ch 4 respectively. (10/23/2017)</p>	
<p>Compute values of the six trigonometric functions and their inverses - Compute values of the six trigonometric functions and their inverses Course Outcome Status: Active Next Assessment: 2021-2022 Start Date: 10/23/2017</p>	<p>Exam - Exam Ch 5 & 6 Quiz Ch 5 Quiz Ch 6 Criterion: Students need to achieve at least 70 % on each assessment measure.</p>	<p>Reporting Period: 2016-2017 Criterion Met: Yes Overall achievement was 79.3, 77.1, 85.3 % for Exam Ch 5 & 6, Quiz Ch 5, and Quiz Ch 6 respectively. (10/23/2017)</p>	
<p>Solve nonlinear inequalities - Solve nonlinear inequalities.</p>	<p>Exam - Problems # 21 and 22 on the final exam</p>	<p>Reporting Period: 2016-2017 Criterion Met: Yes</p>	

<i>Course Outcomes</i>	<i>Assessment Measures</i>	<i>Results</i>	<i>Actions</i>
<p>Course Outcome Status: Active Next Assessment: 2021-2022 Start Date: 10/23/2017</p>	<p>Criterion: Students need to achieve at least 70 % on each assessment measure.</p>	<p>100 % of the students on the problem #21 and 80 % of the students on the problem #22 answered correctly. (10/23/2017)</p>	
<p>Operations with vectors and use vectors to solve real-world problems. - Perform operations with vectors and use vectors to solve real-world problems. Course Outcome Status: Active Next Assessment: 2021-2022 Start Date: 10/24/2017</p>	<p>Exam - Problem #19 on the final exam Criterion: 70% of the students achieve 100% on the problems</p>	<p>Reporting Period: 2016-2017 Criterion Met: Yes 100 % of the students on the problem answered correctly. (10/24/2017)</p>	
<p>Arithmetic and geometric sequences - Describe and define arithmetic and geometric sequences and make effective use of sigma notation Course Outcome Status: Active Next Assessment: 2021-2022 Start Date: 10/24/2017</p>	<p>Exam - Problems #26, 27, 28 on the final exam Criterion: 70% of the students achieve 100% on the problems.</p>	<p>Reporting Period: 2016-2017 Criterion Met: No 80 % on #26, 60 % on #27, and 20 % on #28 of the students answered correctly. (10/24/2017)</p>	<p>Action: Sequence is a new area from previous chapters. I will need to take more time to explain and plan more lecture time for this part. (10/24/2017)</p>
<p>Appropriate mathematical format and notation in solving problems - Demonstrate the appropriate mathematical format and notation in solving problems. Course Outcome Status: Active Next Assessment: 2021-2022 Start Date: 10/24/2017</p>	<p>Exam - Problem #13 of Exam Ch 1 & 2. Problem #3 of Exam Ch 5 & 6. Criterion: 70% of the students achieve 100% on the problems.</p>	<p>Reporting Period: 2016-2017 Criterion Met: No 100 % on the problem #13, and 60 % on the problem #3. (10/24/2017)</p>	<p>Action: Although the overall achievement on both problems #13 and #3 were satisfactory, it is traditional that students would have difficult time on this type problems. New approach utilizing five representations of math problems would be needed. Please see the summary below for the new approach. (10/24/2017) Follow-Up: The areas of weaknesses were identified in the following learning objectives;</p> <ul style="list-style-type: none"> Describe and define arithmetic and geometric sequences and make effective use of sigma notation Operating on functions including composition and inversion, Solving a variety equations including polynomial,

<i>Course Outcomes</i>	<i>Assessment Measures</i>	<i>Results</i>	<i>Actions</i>
			<p>exponential, and logarithmic equations.</p> <ul style="list-style-type: none"> • Perform operations with vectors and use vectors to solve real-world problems. • Describe and define arithmetic and geometric sequences and make effective use of sigma notation. • Vector operations. • Demonstrating the appropriate math format and notation in solving problems. <p>The following points will assist improving the students' weaknesses. 1. Address more examples in the class. 2. Plan more lecture and in-class discussions. 3. Assigning more exercise problems, and utilizing in depth class discussions.</p> <p>Besides the summarized action plans, I would like to emphasize the five representation methods. From the National Council of Teachers of Mathematics (NCTM) conference that I attended last year, I realized that the representations of math problems can be crucial for students' understanding of concepts. There are five representations of mathematics problems. They are visual, physical, contextual, verbal, and symbolic. All of the five representations can be used in classrooms to help students understand better. In addition, interaction activities must be</p>

<i>Course Outcomes</i>	<i>Assessment Measures</i>	<i>Results</i>	<i>Actions</i>
------------------------	----------------------------	----------------	----------------

utilized whether the class is live or online. The instructor must require students to ask questions, engage through discussion and/or writing. The instructor must expect students to do high level thinking and reasoning and provide opportunities for students to solve problems.
(10/24/2017)