Assessment: Course Four Column

Courses (MATH) - Math

MATH 126 JUNG : Pre Calculus I

Course Outcomes	Assessment Measures	Results	Actions
Polynomial, exponential and logarithmic - Solve a variety of equations including polynomial, exponential and logarithmic. Course Outcome Status: Active Next Assessment: 2023-2024	Exam - Proctored assignment: Chapter 1 Exam Problem numbers: #1 78.9% #3 63.2% #11 94.7% #12 68.4% #13 100% Criterion: NA	Reporting Period: 2018-2019 Criterion Met: Yes Average percentage: 81.1% (10/03/2019)	
Functions, including basic mathematical operations, composition and inversion - Operate on functions, including basic mathematical operations, composition and inversion. Course Outcome Status: Active Next Assessment: 2023-2024	Exam - Proctored assignment: Chapter 2 Exam Problem numbers: #13 81.3% #14 93.8% #16 37.5% Criterion: NA	Reporting Period: 2018-2019 Criterion Met: Yes Average Percentage: 70.8% (10/03/2019)	
Properties of logarithms - Use the properties of logarithms. Course Outcome Status: Active Next Assessment: 2023-2024	Exam - Proctored assignment: Chapters 4 Exam Problem numbers: #6 73.3% #7 80% Criterion: NA	Reporting Period: 2018-2019 Criterion Met: Yes Average percentage: 76.7% (10/03/2019)	

Finding roots, turning points, and

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asymptotes - Analyze functions by finding roots, turning points, and asymptotes. Course Outcome Status: Active Next Assessment: 2023-2024	Exam - Proctored assignment: Chapter 3 Exam Problem numbers: #5 53.3% #6 100% #7 86.7% #8 60% Criterion: NA	Reporting Period: 2018-2019 Criterion Met: Yes Average percentage: 75% (10/03/2019)	
Complex numbers and understand their relationship to the solutions of polynomial and rational equations - Manipulate complex numbers and understand their relationship to the solutions of polynomial and rational equations. Course Outcome Status: Active Next Assessment: 2023-2024	Exam - Proctored assignment: Chapter 1 Exam Problem numbers: #6 89.5% #7 78.9% #8 68.4% #10 94.7% Criterion: NA	Reporting Period: 2018-2019 Criterion Met: Yes Average Percentage: 82.9% (10/03/2019)	
Solve nonlinear inequalities - Solve nonlinear inequalities. Course Outcome Status: Active Next Assessment: 2023-2024	Exam - Proctored assignment: Chapter 1 Exam Problem numbers: #15 68.4% #17 78.9% #18 57.9% Criterion: NA	Reporting Period: 2018-2019 Criterion Met: Yes Average percentage: 68.4% (10/03/2019)	
Partial fraction decomposition of a rational expression - Find the partial fraction decomposition of a rational expression. Course Outcome Status: Active Next Assessment: 2023-2024	Exam - Proctored assignment: Chapter 9 Exam Problem numbers: #10 57.1% #11 14.3% Criterion: NA	Reporting Period: 2018-2019 Criterion Met: No Average percentage: 35.7% Results Analysis: Partial fraction decomposition is where students had difficulty in. (10/03/2019)	Action: I am going to give a special assignment on this portion. More assignment problems with reading assignment on the definition would help students for their better understanding. (10/03/2019)
Equations using various methods including elimination, matrices, and determinants - Solve systems of	Exam - Proctored assignment: Chapter 9 Exam	Reporting Period: 2018-2019 Criterion Met: Yes Average Percentage: 76.8% (10/03/2019)	

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equations using various methods including elimination, matrices, and determinants. Course Outcome Status: Active Next Assessment: 2023-2024	Problem numbers: #1 78.6% #2 71.4% #3 64.3% #5 92.9% Criterion: NA		
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: 2023-2024	Exam - Proctored assignment: Chapter 2 Exam Problem numbers: #7 81.3% #8 50% #11 62.5% Criterion: NA	Reporting Period: 2018-2019 Criterion Met: Yes Average percentage: 64.6% Results Analysis: Although the student achievement is satisfactory on this learning outcome, Students need to have deeper understanding on graphing including the piece- wise defined functions, the greatest integer functions, transformations of graphs. (10/03/2019)	Action: For the future class, I am going to give more time to go ove this part of the materials and for online course, I will make a good review videos, so students can have better comprehension. (10/03/2019)
Identify, obtain, and graph the equations of circles and parabolas - Identify, obtain, and graph the equations of circles and parabolas. Course Outcome Status: Active Next Assessment: 2023-2024	Exam - Proctored assignment: Chapter 2 Exam Problem numbers: #1 56.3% #2 56.3% #3 93.8% #5 87.5% Criterion: NA	Reporting Period: 2018-2019 Criterion Met: Yes Average Percentage: 73.4% (10/03/2019)	
Appropriate mathematical format and notation in solving problems - Demonstrate the appropriate mathematical format and notation in solving problems. Course Outcome Status: Active Next Assessment: 2023-2024	Exam - Proctored assignment: Final Exam Problem numbers: #8 76.9% #10 61.5% #11 46.2% #21 92.3% #22 92.3% #23 76.9% Criterion: NA	Reporting Period: 2018-2019 Criterion Met: Yes Average Percentage: 74.4% (10/03/2019)	
Mathematical functions to model	Exam - Proctored assignment:	Reporting Period: 2018-2019	Action: Since students having

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real-world phenomena - Use mathematical functions to model real-world phenomena.	Chapter 4 Exam Problem numbers:	Criterion Met: No Average percentage: 33.4%	difficulty in solving real-world problems is a typical phenomenon, I am going to do
Course Outcome Status: Active Next Assessment: 2023-2024	#18 46.7% #19 20% Criterion: NA	Results Analysis: Students have difficulty in solving real- world problems. These problems were about exponential growth functions. (10/03/2019)	more problems like this type and try to relate math to real world and its usefulness to the world. (10/03/2019)

Follow-Up: Students in this class achieved the expected outcome in 10 of the 12 course leaning outcomes and 2 of the 3 general education learning outcomes. Students didn't do well on the general education learning outcome, Applying relevant mathematical skills in solving realworld problems. Only 33.4% of the students understood and had correct answers in #18 and #19 of the chapter 4 exam. In future classes, I will need to connect math equations with real world problems in order for students to better understand concepts. Also, the students' performance was low in the partial fraction decomposition. The action plans on the learning outcome 1-7 and 3-1 are to give more reading and problem assignments. (10/03/2019)