Assessment: Course Four Column

Courses (MATH) - Math

MATH 127:Precalculus II

Course Outcomes	Assessment Measures	Results	Actions
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:** 2023-2024	**Exam -** Proctored assignment: Final Exam Problem numbers: #1 86% #2 86% #3 100% #5 85% #6 43% #9 43% **Criterion:** NA	**Reporting Period:** 2018-2019 **Criterion Met:** Yes Average percentage: 74% Results Analysis: Students struggled with the inverse trigonometric functions and with solving trigonometric equations. While there is difficulty with solving equations, I believe the real problem is a lack of understanding of the unit circle. In addition, students had difficulty with the material at the end of the semester—mathematical induction and sequence series. (10/29/2019)	**Action:** Spend more time of the basics with the unit circle and ensure students know/memorize the special values. The Math Department has decided to trim the mathematical induction and sequence/series material from the course. Students will get this information in later courses. Removing this material will enable me to spend time on more of the basics. (10/29/2019)
Trigonometric functions and their inverses - Solve equations involving trigonometric functions and their inverses. **Course Outcome Status:** Active **Next Assessment:** 2023-2024	**Exam -** Proctored assignment: Final Exam Problem numbers: #10 0% **Criterion:** NA	**Reporting Period:** 2018-2019 **Criterion Met:** No Average percentage: 0% (10/31/2019)	
Arithmetic and geometric sequences and series and make effective use of sigma notation - Describe and define arithmetic and geometric sequences and series and make effective use of sigma notation. **Course Outcome Status:** Active	**Exam -** Proctored assignment: Final Exam Problem numbers: #16 43% #17 29% **Criterion:** NA	**Reporting Period:** 2018-2019 **Criterion Met:** No Average percentage: 36% (10/29/2019)	

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Next Assessment: 2023-2024			
Principle of Mathematical Induction and the Binomial Theorem - Use the Principle of Mathematical Induction and the Binomial Theorem. **Course Outcome Status:** Active **Next Assessment:** 2023-2024	Proctored assignment: Final Exam Problem numbers: #18 43% #19 57% **Criterion:** NA	**Reporting Period:** 2018-2019 **Criterion Met:** No Average percentage: 50% (10/29/2019)	
Analyze and draw the graphs of the six trigonometric functions and their inverses - Analyze and draw the graphs of the six trigonometric functions and their inverses. **Course Outcome Status:** Active **Next Assessment:** 2023-2024	**Exam -** Proctored assignment: Graphing Exam Problem numbers: #1 0% #2a 40% 2b. 0% **Criterion:** NA	**Reporting Period:** 2018-2019 **Criterion Met:** No Average percentage: 13% Results Analysis: Students demonstrated poor graphing skills. Unlike the other exams in this course, the graphing exam had to be done by hand. Perhaps not using the computer contributed to poor performance. I believe that there is still some problem with learning the basic trigonometric functions and their special values. Students seemed to understand the polar graph. The parametric equation did depend on some knowledge of the trigonometric functions which perhaps contributed to the level of misunderstanding. Students did not understand how to identify and graph the conic sections. (10/29/2019)	**Action:** Again, it is clear that more time and explanation is required on the basic trigonometric functions. I will incorporate more quizzes on the special values to ensure they memorize those values. I will also add in more practice with the conic sections. (10/29/2019)
Analyze and draw the graphs of parametric and polar equations and convert between Cartesian and polar coordinates - Analyze and draw the graphs of parametric and polar equations and convert between Cartesian and polar coordinates. **Course Outcome Status:** Active	**Exam -** Proctored assignment: Graphing Exam Problem numbers: #3 20% #4 80% **Criterion:** NA	**Reporting Period:** 2018-2019 **Criterion Met:** No Average percentage: 50% (10/31/2019)	

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Next Assessment: 2023-2024			
Analyze and graph equations representing conic sections - Analyze and graph equations representing conic sections. **Course Outcome Status:** Active **Next Assessment:** 2023-2024	**Exam -** Proctored assignment: Graphing Exam Problem numbers: #5 80% #6 0% #7 20% **Criterion:** NA	**Reporting Period:** 2018-2019 **Criterion Met:** No Average percentage: 33.3% (10/31/2019)	**Action:** This course needs a lot of work. I am re-recording lectures and changing the structure of the course to include more low-risk assessments. (10/31/2019)