Math 1214 PILOT Syllabus - Spring 2024

Precalculus - Pathways to Calculus: A Problem-Solving Approach,
by Carlson, O'Bryan, Oehrtman, and Moore (with online homework)

Week		Sections	Topics	Work Outside of Class
Week 1	Jan 15-19	**M Jan 15**	**No Class - MLK Jr. Day**	Module 2 Investigation 0
		Intro	Introduction to Precalculus	
		M2I1	Quantities and Co-variation of Quantities	
		M2I2	Representing quantities and changes in quantities	
Week 2	Jan 22-26	M2I2	Representing quantities and changes in quantities	
		M2I3	Constant rate of change and linear functions	
		M2I4	Constant rate of change and proportionality	
		M2I6	Distance formula and equation of a circle	
Week 3	Jan 29 -Feb 2	M2I7	Absolute Value	Module 3 Investigation 0
		M3I1	The box problem and modeling relationships	
		M3I2	Function relations and domain of functions	
		M3I3	Using and interpreting function notation	
Week 4	Feb 5-9	M3I4	Function composition: Chaining together two function process	
		M3I6	Inverse functions: Reversing the process	
		M3I7	Introducing the difference quotient	
Week 5	Feb 12-16	**W Feb 14**	**Test 1 - Module 2 and Module 3**	Module 4 Investigation 0
		M4I1	Percentages and Percent Change	
		M4I2	Comparing linear and exponential behavior	
Week 6	Feb 19-23	M4I6	Compounding periods and compound interest formula	
		M4I7	Investment activity: Focus on formulas and motivating e	
		M4I8	The inverse of an exponential function	
		M4I9	Solving exponential and logarithmic equations	
Week 7	Feb 26 - Mar 1	M5I1	The bottle problem - modeling and co-varying relationships	Module 5 Investigation 0
		M5I3	Transformations of polynomial functions	
		M5I4	Quadratic functions	
		Spring Break March 2 - March 10		
Week 8	Mar 11-15	M5I4	Quadratic functions (vertex form and completing the square)	Module 6 Investigation 0
		M5I5	Roots and end behavior of polynomial functions	
		M6I1	Introduction to Rational Functions and Vertical Asymptotes	
Week 9	Mar 18-22	M6I2	End behavior of rational functions	
		M6I3	Graphing rational functions and understanding limits	
		M6I4	Co-variation of numerators and denominators of rational funct	
Week 10	Mar 25-29	**W Mar 27**	**Test 2 - Module 4, Module 5, and Module 6**	Module 7 Investigation 0
		M7I1	Angle Measure	
		M7I2	Angle Measure in Context	
		M7I3	Representing circular motion	
Week 11	Apr 1-5	M7I4	Using sine and cosine function to track circular motion	
		M7I5	Using the sine and cosine function in applied settings	
		M7I6	Transformations of the sine and cosine functions	
		M7I7	Shifts/transformations of period functions	
Week 12	Apr 8-12	M7I8	The tangent function	Module 8 Investigation 0
		M7I9	Negative angle measure, co-terminal angles, and periodicity	
		M7I10	Inverse trigonometric functions	
		M8I0	Relevant skills and procedures (Unit Circle)	
Week 13	Apr 15-19	M8I1	Right triangle trigonometry	
		M8I2	Right triangle trigonometry applications	
		M8I3	Trigonometric identities	
Week 14	Apr 22-26	**M Apr 22**	**Test 3 - Module 7 and Module 8 (I0, I1, I2)**	
		M8I3	Trigonometric identities	
			Solving trigonometric equations	
Week 15	Apr 29 - May 1		Solving trigonometric equations	
			Review for final exam	
FINAL EXAM		**Final Exam**		