College Algebra&Trig (M135) **81627** (4 credits) MW4:00-5:50 T13-G Prof. Battaly www.battaly.com/algebra_trig/ Text: Algebra & Trigonometry,5th ed, Robert Blitzer, 2014. TI-84 calculator Fall, 2016

Date	Section	Topic									
Sep 7	P.1*-P.2	Absolute Value, Exponents & Scientific Notation									
12 P.3		Radicals, Radical Expressions									
14 P.4		Polynomials									
19P.521P.6261.1,1.2		Factoring Polynomials Rational Expressions Graphs, Linear Equations, Rational Equations									
						28 1.3		Linear Models & Applications			
						Oct 3 _ 1.4		Complex Numbers			
5	***1.5	*** Test # 1 (Ch. P-1.3) ***Quadratic Equations									
10_	1.6	Quadratic Equations, Other Equations									
12_	2.1	Basics of Functions									
17	1.7	Inequalities and Absolute Value									
19	2.3	Linear Functions & Slope									
24	2.4	More on Slope									
26	2.8	Distance and Midpoints									
31_	3.1	Quadratic Functions									
Nov 2	4.1 W	Exponential Functions									
### W 7	4.2	Logarithmic Functions									
9	***4.3	*** Test # 2 (Ch. 1.4-4.1) *** Properties of Logarithms									
14	4.3	Properties of Logarithms									
16 4.4		Exponential & Logarithmic Equations									
21 4.5		Exponential Growth and Decay, Modeling Data									
23 5.1		Angles and Radian Measure									
28	5.2	Right Triangle Trigonometry									
30	5.3	Trigonometric Functions of Any Angle									
Dec 5 5.4		Trigonometric Functions of Real Numbers, Periodic Functions									
7 5.5		Graphs of Sine and Cosine Functions									
12	5.6	Graphs of Other Trig Functions*									
14											
19	ChP-5	FINAL EXAM (2 hours) [Dec 21 if school is closed on Dec 1									

FINAL GRADE = 2/3 Class Ave. + 1/3 Final Exam

Class Ave: Mean of Tests and Quizzes, Quiz Ave= 1 test.

Tests: Full period (50 minutes), <u>NO MAKEUPS</u>. If a test is not taken, the grade for that test is 0. One test grade <u>may</u> be replaced with a 4 to 5 page paper (See below). Material covered on test includes material since last exam.

Quizzes: Unannounced, **any WEDNESDAY**, <u>NO MAKEUPS</u> If there are more than 6 quizzes, 2 quizzes will be dropped before the average is computed; if less 6 or fewer quizzes, 1 quiz will be dropped. Covers material from previous week. If a quiz is not taken, the grade for that quiz is 0.

FINAL: Comprehensive, Date: Dec 19 (Note: If WCC is closed on 12/19, then Final Exam on Dec 21)

PAPER: 4-5 pages, typed, double spaced. Subject should be one of the topics covered on the test to be replaced. For a grade of C, the paper <u>must</u> include 1) a complete description/explanation of the topic with an example and 2) three references. Use citations of the form (author, page) for ALL content new in this course. For a higher grade, the paper should include such additional information as scientific or social applications, historical development of technique, relationship of topic to other topics in the course, etc. Required only if a test is missed. An outline must be submitted prior to writing the paper. See scoring sheet.

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ATTENDANCE: Absence from class will not affect final grade, except as it effects quiz/tests grades.

ASSIGNMENTS: All odd problems unless otherwise noted.

W ### LAST DAY TO WITHDRAW with a W (11/7) ### | class is scheduled 11/24 (night before Thanksgiving)

STUDENT LEARNING OUTCOMES (SLO) and COURSE OBJECTIVES for MATH 135 College Algebra & Trig

	OUTCOME - Upon successful completion, the student will be able to						
	SLO1: The student will become proficient with the language and methodology of algebra and trigonometry.						
	Objectives:						
	1. Speak/write correct mathematical symbols/expressions						
	2. Solve algebra/trigonometric problems by using correct mathematical symbols and expressions						
	3. Choose appropriate method to solve problems in algebra or trigonometry						
	SLO2: The student will achieve competence in the manipulation and computation of mathematical formulae.						
	Objectives:						
	1. Choose appropriate formulae to solve application problems in algebra/trigonometry						
	2. Understand how a mathematical formula is derived						
	3. Use technology, such as TI graphing calculators, to efficiently compute numerical results that involve mathematical formulae						
	SLO3: The student will solve application problems in physical and/or non-physical sciences.						
	Objectives:						
	1. Choose appropriate method to solve application problems in algebra or trigonometry						
	2. Transform verbal problems into appropriate mathematical models						
3. Present solutions in coherent manner with correct mathematical expressions or symbols							
	4. Know the meaning of an approximation result from the exact result of a computation						
	SLO4: The student will understand						
	 real numbers, irrational numbers, and non-real complex numbers (imaginary numbers) 						
	 the meaning of simplifying a radical or radical expression 						
	 the meaning of simplifying an algebraic expression or a rational expression 						
 the meaning of solving an equation or an inequality 							
	 the intercepts of a graph of an equation 						
 the mathematical concept of relations and function 							
 relationship between exponential functions and the logarithmic functions 							
	 the right-triangle trigonometric relations and the trigonometric relations in the Cartesian Plane 						
	Objectives:						
1. Identify numbers as rational, irrational, non-real complex numbers							
2. Solve equations and inequalities (linear or non-linear, including absolute value)							
3. Write up equations for lines, parabolas, and circles							
4. Sketch graphs of equations, including lines, parabolas, circles, exponential/logarithmic functions, and trigonometric function							
5 Chaoca appropriate methods to solve problems							

5. Choose appropriate methods to solve problems

This $\ensuremath{\mathsf{outcome}}$ will be measured by $\ensuremath{\mathsf{one}}$ or $\ensuremath{\mathsf{more}}$ of the following

*Class participation

*Hon	Newor	٠k		

*Tests (in class or take home) *Projects

* Quizzes (in class or take home) *Final Exam

Indicate which of the above SLO's address the SUNY General Education (GE) Mathematics requirement. Upon successful completion, students will demonstrate the ability to:

SUNY GE 1: interpret and draw inferences from mathematical models such as formulas, graph	s, tables and schematics;				
	SLO 1, 2, 3, 4				
SUNY GE 2: represent mathematical information symbolically, visually, numerically and verbally	y; SLO 1, 2, 3, 4				
SUNY GE 3: employ quantitative methods such as, arithmetic, algebra, geometry, or statistics to solve problems;					
	SLO 1, 2, 3, 4				
SUNY GE 4: estimate and check mathematical results for reasonableness; and	SLO 1, 2, 3, 4				
SUNY GE 5: recognize the limits of mathematical and statistical methods.	SLO 1, 2, 3, 4				

Student Contributions

Students are expected to attend every class meeting, arriving on time.

Cell phones and/or other communication devices should be turned off for the duration of each class meeting. Assignments are to be completed on time.

Students are expected to take all tests and quizzes as scheduled. There are no exemptions for any exams. Students should expect to spend a minimum of 2 hours per week outside of class for every hour spent in class. Students should comply with the <u>WCC Student Code of Conduct</u>, including: 1) respect for all, 2) no cheating. I understand that the final date to withdraw from this class is Monday, November 7, 2016. If I need to withdraw after that date, I will need to bring a note to Professor Battaly from the WCC Health Office, explaining the medical need to withdraw.

Date

Name