

Math 227 Lab Component

COURSE CONTENT AND SCOPE - Lab: Outline the topics included in the lecture portion of the course (<i>Outline reflects course description, all topics covered in class</i>).	Hours Per Topic	COURSE OBJECTIVES – Lab: Upon successful completion of this course, the student will be able to...(Use action verbs – see Bloom's Taxonomy for 'action verbs requiring cognitive outcomes.')
Fractions, decimals, and percents. Significant digits, place value, and scientific notation.	5	Perform conversions among fractions, decimals, and percent. Define significant digits. Round decimal numbers to the given place value. Perform conversions between scientific notation and decimal notation.
Exponents, square roots, and order of operations.	5	Simplify expressions with square roots and exponents. Evaluate expressions using the order of operations.
Summation.	1	Evaluate expressions using summation notation. Find the sum of a list of values.
Statistical technology, such as TI graphing calculators, Excel, Minitab, or other statistical software packages.	4	Compute descriptive statistics, including mean, standard deviation, and variance, draw graphs, construct confidence intervals, and perform hypothesis testing.
Linear equations in two variables including standard form, slope-intercept form, and the point-slope form. Graphs, estimation, and predictions.	6	Graph linear equations in standard form and in slope-intercept form. Interpret the slope and the y-intercept for linear applications modeled by a linear equation. Formulate the equation of a line given the slope and a point, and given two points on the line. Estimate the y-values based on the given x-values. Interpret the results.
Linear equations and linear inequalities in one variable. Solving equations and Inequalities.	6	Translate key words such as "at most" and "at least" into a mathematical inequality. Solve linear equations and inequalities containing integers, fractions, and decimals. Solve equations and inequalities for a specified variable.
Set theory and Venn diagrams.	1	Construct Venn diagrams to represent operations for sets, such as union, intersection, and complement.
Tree diagrams, sample spaces, and probability.	3	Construct tree diagrams to find sample spaces for a sequence of experiments; compute basic probabilities of events.
Counting theory.	3	Solve counting problems using the multiplication principle, permutations, and combinations.
Contingency tables.	2	Interpret contingency tables. Perform computations using contingency tables and interpret the results.
Total:	36	
Total Lab Hours In Section I Class Hours:	36	