

## Math 120E Quantitative Literacy

**Credit Hours:** 0

**Scheduled hours per week**

Lecture: 0

Lab: 2

Other: 0

**Catalog Course Description:** This co-requisite course is designed to establish the necessary background knowledge to be successful in Math 120 Quantitative Literacy.

**Pre-requisites:** None

**Co-requisites:** Math 120 Quantitative Literacy

### Course Learning Outcomes:

- A. Add, subtract, multiply and divide whole numbers, fractions and decimals, and solve applications using all three.
- B. Demonstrate an understanding of ratio and proportion and their applications.
- C. Demonstrate an understanding of percent and solve percent application problems.
- D. Demonstrate an understanding of exponents and be able to use the order of operations.
- E. Establish an understanding of the properties of Real numbers.
- F. Demonstrate ability to simplify algebraic expressions.
- G. Solve simple linear equations of one variable.
- H. Demonstrate the ability to evaluate and manipulate literal equations.
- I. Demonstrate the ability to evaluate, simplify, add, subtract, multiply and rationalize radicals.
- J. Estimate a reasonable answer to an application problem using techniques of rounding.
- K. Demonstrate several standard problem solving techniques.

### Topics to be studied:

Whole numbers, Integers, Rational numbers, Irrational numbers and Real numbers  
Exponents and order of operations  
Reducing fractions and basic operations  
Mixed numbers  
Converting fractions and decimals to percentages  
Variables  
Algebraic expressions  
Solving linear equations of one variable (with applications)  
Geometric formulas  
Ratio and proportion – percent proportion and percent equation  
Radicals – evaluating, simplifying and rationalizing

**Relationship of Course to Program or Discipline Learning Outcomes:**

(What program outcomes are being met by this course?)

For general education courses, a listing of the general education competencies that are met.)

<b>Relationship of Course to Mathematics (MATH) Student Learning Outcomes:</b>	
<b>Demonstrate understanding</b> of the language of mathematics, by their use of symbols, definitions, word phrases, and representations.	x
<b>Display proficiency</b> in mathematical computations.	x
<b>Implement mathematical techniques</b> to solve applied problems.	x
<b>Employ appropriate technology</b> to demonstrate knowledge of mathematical concepts.	x
<b>Exhibit mastery</b> of core course competencies.	x
<b>10/20/2017</b>	

<b>Relationship of Course to General Education Learning Outcomes:</b>	
<b>Composition and Rhetoric</b> Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	
<b>Science &amp; Technology</b> Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	
<b>Mathematics &amp; Quantitative Skills</b> Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	x
<b>Society, Diversity, &amp; Connections</b> Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	
<b>Human Inquiry &amp; the Past</b> Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	
<b>The Arts &amp; Creativity</b> Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	
<b>5/3/2016</b>	

**Special requirements of the course:** None

**Additional information:** None

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**Date:** 8/10/16