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.)

### Relationship of Course to General Education Learning Outcomes:

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Composition and Rhetoric</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Science &amp; Technology</strong></td>
<td>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.</td>
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<tr>
<td><strong>Mathematics &amp; Quantitative Skills</strong></td>
<td>Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.</td>
</tr>
<tr>
<td><strong>Society, Diversity, &amp; Connections</strong></td>
<td>Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.</td>
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<tr>
<td><strong>Human Inquiry &amp; the Past</strong></td>
<td>Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.</td>
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<tr>
<td><strong>The Arts &amp; Creativity</strong></td>
<td>Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.</td>
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Date: 5/3/2016

### Relationship of Course to Mathematics (MATH) Student Learning Outcomes:

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<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Demonstrate understanding of the language of mathematics, by their use of symbols, definitions, word phrases, and representations.</td>
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<tr>
<td>Display proficiency in mathematical computations.</td>
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<tr>
<td>Implement mathematical techniques to solve applied problems.</td>
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<tr>
<td>Employ appropriate technology to demonstrate knowledge of mathematical concepts.</td>
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<tr>
<td>Exhibit mastery of core course competencies.</td>
<td>x</td>
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Date: 10/20/2017

Special requirements of the course: None

Additional information: None

Prepared by: Katie Life

Date: 8/10/16