SECTION HEADING

MATH 0115: Co-requisite with Intro to Probability and Statistics

Description

Co-requisite with Intro to Probability and Statistics supports students who qualify with additional review, just-in-time learning, deeper conceptual development, repetition over time, and learning skills and habits required to be successful with the corresponding college level Math 1105 Intro to Probability and Statistics course taken concurrently.

Credits

2

Prerequisite

ACT Math score of 15-18 or placement by multiple measures

Corequisite

None

Topics to be Covered

1. Growth Mindset, Study Skills and Habits

2. Introduction to Statistics – Descriptive and Inferential

3. Organizing data – graphs and charts

4. Numerical descriptive measures – grouped and ungrouped data

5. Probability concepts

6. Discrete random variables and their probability distributions

7. Continuous random variables and normal distributions, sampling distributions and the Central Limit Theorem

8. Estimating means and proportions

9. Hypothesis tests about the mean and proportion

10. Inferences from two samples

11. Correlation and Regression

12. Goodness-of-Fit and Contingency Tables

13. Analysis of Variance

Learning Outcomes

1) The student will develop a plan of action on how to successfully complete a college level mathematics course.

A) Evaluate the time necessary to be successful in a college level mathematics course.

B) Develop skills for studying mathematics

C) Construct an action plan for success

D) Identify steps to problem solving

E) Discuss answers mathematically and apply the results to context

2) The student will recognize, convert, classify, and evaluate variables using standard form and scientific notation.

A) Recognize variables and classify data type

B) Convert units of measurement

C) Perform calculations with standard form and scientific notation

D) Apply significant digits and round numbers.

3) The student will perform calculations and recognize the relationship between decimals, fractions and percentages.

A) Simplify fractions.

B) Convert between fractions, decimals and percentages.

C) Calculate frequencies.

4) The student will be able to graph points and use formulas to perform calculations.

A) Plot points on the Cartesian plane.

B) Apply order of operations

C) Recognize symbols in formulas and how to apply these symbols including exponents, square roots and summation.

D) Apply set notation including unions, intersections and complements.

5) The student will be able to determine the slope and y-intercept of a line as well as state the equation of a line in slope-intercept form and graph the line.

A) Calculate slope and discuss its meaning

B) Find the slope-intercept equation for a line

C) Determine points on a line

D) Graph a line using points.

Credit Details

Lecture: 2

Lab: 0

OJT: 0

MnTC Goal Area(s): None