COURSE NUMBER: MAT308

COURSE TITLE: Inferential Statistics

Faculty Name:

Contact Information:

Pre-Requisite: MAT122 or MAT205 with minimum grade of C or BSN Candidate

Text/Software:

Credits: 3

40 Hours of Structured Learning Activities

COURSE DESCRIPTION: This course introduces the student to the scientific method of collecting, organizing, and interpreting quantitative data in real-world applications. Topics include sampling methods, graphical displays, measures of central tendency and dispersion, linear regression and correlation, continuous and discrete probability distributions, confidence intervals for one-sample means and proportions, hypothesis testing for one- and two-sample population means, and goodness of fit hypothesis testing.

At the conclusion of this course, students will be asked to evaluate the course based on the following objectives:

IDEA – 1 Gain factual knowledge (terminology, classifications, methods, trends).
IDEA – 2 Learn fundamental principles, generalizations or theories.
IDEA – 3 Learn to apply course material (to improve thinking, problem solving and decisions).
GOAL A:
Analyze Data Using Descriptive Statistics

Learning Objectives: The student will:
A-1 Create frequency distributions.
A-2 Create and compare graphical displays.
A-3 Calculate and compare measures of central tendency.
A-4 Calculate and compare measures of dispersion.
A-5 Calculate and use the correlation coefficient to describe and make inferences about bivariate data.
A-6 Calculate and use a least-squares regression line for bivariate data.

GOAL B:
Calculate Probabilities

Learning Objectives: The student will:
B-1 Calculate probabilities using rules of addition and multiplication, in addition to combinations and permutations.
B-2 Calculate and interpret probabilities for discrete probability distributions.
B-3 Calculate and interpret probabilities for continuous probability distributions.

GOAL C:
Analyze Data Using Inferential Statistics

Learning Objectives: The student will:
C-1 Construct and interpret confidence intervals for population parameters for one-sample, specifically mean and proportion.
C-2 Perform and interpret hypothesis tests for one and two sample population means.
C-3 Perform and interpret hypothesis tests for goodness of fit.
EVALUATION PROCEDURE AND GRADING POLICY:

LATE ASSIGNMENT POLICY:

CAS CLASSROOM STANDARDS: See Blackboard “Syllabus” area

COURSE SCHEDULE (all assignments/exams and due dates):