

**J. Sargeant Reynolds Community College  
Course Content Summary**

**Course Prefix and Number:** MTH 240

**Credits:** 3

**Course Title:** Statistics

**Course Description (including lecture hours, lab hours, total contacts)**

Presents an overview of statistics, including descriptive statistics, elementary probability, probability distributions, estimation, hypothesis testing, and correlation and regression. Lecture 3 hours per week.

**General Course Purpose**

Prepares students to create and interpret statistics.

**Course Prerequisites/Corequisites** (*Entry-level competencies **required** for enrollment*)

MTH 163 or MTH 166 or equivalent. (Credit will not be awarded for both MTH 240 and MTH 241.)

**Course Objectives** (Each item should complete the following sentence.)

Upon completing the course, the student will be able to:

- a. Organize given data into usable form
- b. Use numerical methods to analyze data
- c. Understand the basic concepts of probability as related to statistics
- d. Associate probability with statistical inference by means of sampling distribution
- e. Use statistical tables
- f. Construct confidence intervals for means and proportions
- g. Test statistical hypotheses concerning means and proportions
- h. Understand the basic concepts of linear correlation and regression

**Major Topics to be Included**

- a. The nature of statistics
- b. Description of sample data
- c. Numerical methods for analyzing data
- d. Probability and its statistical applications
- e. The normal distribution
- f. Sampling distributions
- g. Estimation
- h. Hypothesis testing
- i. Linear regression and correlation

**Effective Date of Course Content Summary (Month, Date Year):** September 2007