# MTH 243: Statistics I

Introduces displaying data with graphs, numerical descriptions of data, producing data, elementary probability, probability distributions, confidence intervals and significance testing. Investigates applications from science, business, and social science perspectives. Graphing calculator with advanced statistical programs and/or computer software required; see instructor.

This is the first term of a two-term sequence (MTH 243 and 244) that is intended to provide an introduction to statistics in a data-based setting.

## Course Student Learning Outcomes

Upon completion of the course students should be able to:

- Identify statistical results and terminology in politics, popular culture, and scientific studies and state their relevance.
- Use statistical thinking to identify, answer and interpret meaningful questions.
- Generate appropriate graphical and numerical summaries for various situations.
- Describe and identify the role and importance of variability and randomness in statistics.
- Use statistical models (single and multivariable) and statistical inference (hypothesis testing and confidence intervals) in a range of contextual settings and draw appropriate conclusions.
- Use statistical software to analyze data, carry out inference and make conclusions.
- Be prepared to continue a course of study in a major field that requires the use and understanding of the concepts and logical implications of probability and statistics.

Credits: 5
Prerequisites: WR 115 RD 115 MTH 95 Equivalent placement test scores also accepted. MTH98 or higher also accepted.
Program: Mathematics