STAT 845 Statistical Methods for Research

2026-2027 T1

Instructor:

Dr. Shahedul Khan
khan@math.usask.ca

Course Details

STAT 845 CRN 81424

Schedule:

Term 1
T, R 1:00 – 2:20 pm

Tentative Topics:

Some of the topics covered will include:

- Regression Analysis
  - Simple Linear Regression
  - Multiple Linear Regression
  - Logistic Regression
- Design and Analysis of Experiments
  - Introduction and Single-Factor Experiments.
  - Factorial Experiments

Course Objective:

- Develop clear and concise descriptions of problems of interest.
- Propose appropriate models for given problems, and state any underlying assumptions and limitations.
- Refine models based on observed data.
- Use models to support the development of solutions.
- Identify key variables that influence the problem or its solution.
- Draw conclusions and make recommendations based on the results.

Students Who May Be Interested:

Graduate students in Statistics, Biostatistics, Mathematics, SPH, Epidemiology, Computer Science, Engineering

Other Information:

This course provides a graduate-level introduction to applied statistics and probability, with applications in engineering as well as the natural and physical sciences, health sciences, business, and the social sciences. The course emphasizes the development and application of statistical methods for regression analysis and the design of experiments, as well as the construction of quantitative models. Particular attention is given to understanding variability, assessing uncertainty, drawing rigorous inferences, and making reliable predictions in scientific and engineering contexts.