

**Department:** Statistics

**Course No:** STAT 110Q

**Title:** Elementary Concepts of Statistics

**Credits:** 4

**Contact :** Dipak K. Dey

**WQ:** Q

**Catalog Copy :** Either semester. Four credits. Three class periods and one discussion period.

Prerequisite: MATH 101 or passed Q Readiness Test or passed Q course. See credit restrictions above.

Standard and nonparametric approaches to statistical analysis; exploratory data analysis, elementary probability, sampling distributions, estimation and hypothesis testing, one- and two-sample procedures, regression and correlation. Learning to do statistical analysis on a personal computer is an integral part of the course.

**Course Information :**

A. The course goal is to teach students to perform statistical analysis in the area of science and technology. The material covered will include elementary probability, sampling distributions, normal theory estimation and hypothesis testing, regression and correlation, exploratory data analysis. Learning to do statistical analysis on a computer is an integral part of the course.

B. 3 in-class exams, weekly reading assignments, 8 MINITAB assignments. Reading materials covered in class. Problems from text and analyzing statistical data using MINITAB software.

C. A standard approach to statistical analysis primarily for students of business and economics; elementary probability, sampling distributions, normal theory estimation and hypothesis testing, regression and correlation, exploratory data analysis. Learning to do statistical analysis on a personal computer is an integral part of the course.

**Q Criteria :** It includes mathematics and statistics above the basic algebra level as an integral part which is used throughout the course. The course includes use of basic algebraic concepts such as: formulas and functions, linear and quadratic equations and their graphs, systems of equations, polynomials, fractional expressions, exponents, powers and roots, problem solving and word problems. The course requires the student to understand and carry out actual mathematical and statistical manipulations, and relate the materials to whatever data might be provided in order to draw conclusions.

**Role of Grad Students:** The graduate assistants in this course teach MINITAB software for data analysis, helps students in solving problems from the text, grade MINITAB assignments and assigned problems. They also proctor the exams and assist in grading. They are supervised by the instructor for this class.