

STATISTICS 2500
STATISTICS FOR BUSINESS AND ARTS STUDENTS

Statistics is the science and craft of gathering and interpreting data. Because data are omnipresent, everyone will find statistics useful, and perhaps even profitable. As such, it is an essential part of the daily life of every informed person; for example, to understand opinion polls or the consumer price index. Statistics is an essential tool of researchers and business professionals in almost all disciplines.

Although statistics is appreciated by some for what it can do, there is a suspicious perception of the discipline in the minds of many. Some individuals appear to hold the extreme position that any argument that contains any elements of statistics is by its very nature suspect and should be totally disregarded. On the other extreme are individuals who feel that certain statistics must be completely accurate if they are produced by an institution they trust, such as Statistics Canada. We recommend seeking a middle ground: develop an active scepticism, as opposed to cynicism, towards all statistical investigations and the results thereof, a scepticism that is based on a rational consideration of the statistical principles involved.

The purpose of this course is to give a student an opportunity to learn to use basic statistical concepts and tools and to be coached while using them later in a real world application. We do not intend to produce statisticians in this course. The goal is for you to leave the course as a person who can use basic statistical tools.

Text. In recent years, the text for this course has been *Statistics for Business and Economics* by James T. McClave, P. George Benson and Terry Sinich.

Marks. It is typical to assign 50% of the final grade to a final exam, 20% to a midterm, 20% to weekly quizzes and 10% to weekly assignments.

Calendar description. **2500 Statistics for Business and Arts Students** covers descriptive statistics (including histograms, stem-and-leaf plots and box plots), elementary probability, discrete random variables, the binomial distribution, the normal distribution, sampling distribution, estimation and hypothesis testing including both one and two sample tests, paired comparisons, chi-square test, correlation and regression. Related applications.

Prerequisite: Mathematics 1000 or 6 credit hours in first year courses in Mathematics or registration in at least semester 3 of a B.N. program or permission of the head of department.

Note: Credit can be obtained for only one of Statistics 2500, 2510, 2550, Psychology 2910, 2925 and the former 2900. Statistical computer package will be use in the laboratory, but no prior computing experience is assumed.

Offered. Fall and Winter