

# GEN/OPM2402 Business Statistical Analysis

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**Code**

GEN/OPM2402

**Title**

Business Statistical Analysis

**Prerequisites**

GEN 1201, Math for Business and Economics

**Credits**

3

**Description**

The course is intended to giving a clear summary of the essential concepts of business statistics. It will cover such important topics as elements of probability theory, sampling surveys, hypotheses testing, regression analysis, analysis of variance.

**Objectives**

Students will be able to: solve simple probability problems, understand and explain problems of parameters estimating and testing, to perform linear regression analysis, analysis of variance, etc. Problems of ethics in statistics will also be considered.

**Outcomes**

There will be several tutorial sessions that will allow students to solve problems in a setting that will test their understanding and application of the materials presented in the lectures. Many exercises will be given. Student's critical thinking will be assessed during two written tests and final exam by checking their ability to solve and explain solutions of numerous applied statistical problems.

**Assessment**

60 % -first and second assessments

40 % -final assessment

**Tentative course outline****Week1**

Introduction to statistics Statistics, Data, and Statistical Thinking Chapter 1 - problems of statistics - basic definitions - types of data and variables  
- random sampling - stem and leaf display Methods for Describing Sets of Data chapter 2

**Week2**

Methods for Describing Sets of Data (continues) chapter 2 Probability chapter 3

**Week3**

Probability (continued) chapter 3 First mid-term exam (Tuesday 26 May) done 25% marks Random Variables and Probability Distributions  
Chapter 4

**Week4**

Sampling Distributions Chapter 5 Inferences Based on a Single Sample chapter 6

**Week5**

Inferences Based on a Single Sample: Tests of Hypothesis chapter 7 Second mid-term exam (Monday 8 June) 30% marks Inferences Based on a  
Two Samples Confidence Intervals and Tests of Hypothesis Chapter 8

**Week6**

Design of Experiments and Analysis of Variance Chapter 9 Categorical Data Analysis chapter 10

**Week7**

Simple Linear Regression chapter 11 Multiple Regression and Model Building chapter 12

**Week15**

Final exam (Wednesday 1 July) 35%