

**Syllabus**  
**STAT 02.261 - Statistics II**

**CATALOG DESCRIPTION:**

STAT 02.261 - Statistics II - 3 s.h.

(Prerequisite: STAT 02.260 - Statistics I with a grade of C- or better)

This course is a continuation of Statistics I. Confidence intervals and hypothesis tests are studied in more detail, beginning with two sample inference for means and proportions. The inferences in simple linear regression and multiple regression are presented. Analysis of variance and experimental design are introduced. Other topics include chi-square tests for goodness-of-fit and independence, and the principles of nonparametric tests. Use of statistical software such as JMP, Minitab, SPSS or SAS, is also required.

**OBJECTIVES:**

The objectives of this course are to further students' knowledge of introductory statistics and its applications in decision making. Decision making in all areas of applications are discussed with an emphasis on management and business. Statistics I is a prerequisite for this course.

**CONTENT:**

1. The role of statistics in decision making
2. Classical two-sample inference
3. Simple Linear Regression and Correlation
4. Multiple Regression
5. Chi-square tests of goodness-of-fit and independence
6. Analysis of Variance
7. Introduction to Non-parametric Methods

**TEXTBOOK(s):**

Normally, if it is possible, the same text is used for Statistics I and Statistics II, however Statistics II may require a supplemental text. Many statistics texts are written for a two semester sequence, but they can be weak in one topic or another. Therefore it may not be the same textbook for Stat I as used in Stat II.

- Black, Ken Business, Statistics for Contemporary Decision Making, 10th edition. Wiley Publishing, 2019
- Moore, David S., and George P. McCabe, Introduction to the Practice of Statistics, 10th edition. W.H. Freeman, New York. 2021. [Might require additional book.]
- \*Peck, Roxy, Chris Olsen, and Jay Devore, Introduction To Statistics And Data Analysis, 6/E. Thomson Brooks/Cole (Cengage), 2019.  
(Note: It appears the Hardcopy of the text does not include any non parametric testing Chapter, but the publisher has posted it with online access.)
- Sharpe, Norean R., Richard D. De Veaux, and Paul F. Vellema, Business Statistics, 4th edition, Pearson, 2019.
- Stine, Robert and Dean Foster, Statistics for Business Decision Making and Analysis, 3rd edition, Addison Wesley, 2017.