# SYLLABUS

## 2013-2014 Spring Semester

### STAT204

#### Course Details:
- **Course Type:** Credits: 3
- **ECTS:**
- **Weekly Time Schedule:**
  - **T A L:** Monday 16:00-18:00
  - **Thursday:** 14:00-17:00

#### Prerequisite:
- **Prerequisite to:**
  - Lifelong Learning Programme (LLP)

#### Evaluation Tools:
- **Final Exam:**
  - **Quantity:** 1
  - **Date:** 02-14 June 2014
  - **Weight in Total (%):** 45
  - **Weight in Semester Evaluation (%):**

- **Semester Evaluation:**
  - **Midterm(s):**
    - **Quantity:** 1
    - **Date:** 05-12 April 2014
    - **Weight in Total (%):** 35
  - **Quiz(zes):**
    - **Quantity:** 2
    - **Date:** During lecture hours
    - **Weight in Total (%):** 20

- **Projects(s):**
- **Homework(s):**
- **Laboratory:**
- **Other:**

#### Course Objectives:
The main purpose of this course is to introduce confidence interval estimation with further topics, hypothesis tests of a single and two population. This course also introduces regression analysis with two variable and multivariable, applications of regression analysis, nonparametric statistics.

#### Learning Outcomes:
1. Estimating confidence interval of the difference between two normal population means and population proportions
2. Conducting and interpreting tests of hypothesis in a wide variety of contexts
3. Using regression analysis with two and multiple variable with applications in business, economics, and other related fields
4. Using nonparametric tests for population parameters unknown (Goodness-of-Fit Tests), for paired or matched samples (Sign Test, Wilcoxon Signed Rank Test), and for independent random samples (Mann-Whitney U Test, Wilcoxon Rank Sum Test)

#### Textbooks and References:

#### Topics:
- **Week 1:**
  - Date: 1.8; 1.2

- **Week 2:**
  - 27.02.2014 Confidence Interval Estimation of the Difference Between Two Population Proportions (Large Samples)
  - Date: 1.8; 3

- **Week 3:**
  - 06.03.2014 Hypothesis Tests of a Single Population: Tests of the Mean of a Normal Distribution
  - Date: 1.9; 3.2

- **Week 4:**
  - Date: 1.9; 9.3

- **Week 5:**
  - 20.03.2014 Hypothesis Tests of a Single Population: Tests of the Variance of a Normal Distribution
  - Date: 1.9; 6

- **Week 6:**
  - Date: 1.10; 10.2

- **Week 7:**
  - 03.04.2014 Two Population Hypothesis Tests: Tests of the Difference Between Two Population Proportions and
  - Date: 1.10; 3.10; 4.10.5

- **Week 8:**
  - 05-12.04.2014 MIDTERM WEEK

- **Week 9:**
  - 17.04.2014 Two Variable Regression Analysis: Least Squares Coefficient Estimators and Coefficient of Determination
  - Date: 1.11; 1.2; 1.3; 1.4

- **Week 10:**
  - Date: 1.11; 1.6; 1.7

- **Week 11:**
  - 01.05.2014 Public Holiday

- **Week 12:**
  - 08.05.2014 Multiple Variable Regression Analysis: Least Squares Procedure, Tests on Regression Coefficients
  - Date: 1.12; 1.2; 1.3; 1.4; 1.5

- **Week 13:**
  - 15.05.2014 Introduction to Nonparametric Statistics: Goodness-of-Fit Tests
  - Date: 1.14; 1.4; 1.4

- **Week 14:**
  - 22.05.2014 Introduction to Nonparametric Statistics: Contingency Tables, Sign Test, Wilcoxon Signed Rank Test
  - Date: 1.14; 3.4

- **Week 15:**
  - 29.05.2014 Introduction to Nonparametric Statistics: Nonparametric Tests for Independent Random Samples
  - Date: 1.14; 3.4; 4.17

- **Week 16**

#### Language of Instruction:

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**Recommended ECTS Credit (Total Hours / 25):**

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