



UNIVERSITY OF NICOSIA ΠΑΝΕΠΙΣΤΗΜΙΟ ΛΕΥΚΩΣΙΑΣ

University of Nicosia, Cyprus

Course Code MATH-321	Course Title Statistics II	ECTS Credits 6
Department Computer Science	Semester Fall, Spring	Prerequisites MATH-221
Type of Course Required	Field Mathematics	Language of Instruction English
Level of Course 1 st Cycle	Year of Study 3 rd	Lecturer(s) Dr Stavros Pouloukas
Mode of Delivery Face-to-face	Work Placement N/A	Co-requisites None

Objectives of the Course:

The main objectives of the course are to:

- Provide students with deep knowledge of the theory of hypothesis testing about population means and proportions.
- Cover in detail all aspects of Analysis of Variance.
- Cover in detail all aspects of the Chi Square Test.
- Cover in detail all aspects of Correlation, Regression and Time Series Analysis.
- Make students aware of the basic Non parametric Tests.

Learning Outcomes:

After completing the course students are expected to be able to:

1. Execute hypothesis testing for the Population Mean μ and the Proportion p .
2. Execute hypothesis testing for the difference between two Population Means (independent samples).
3. Make students aware of Linear Correlation and to perform Multiple Regression.
4. Execute Tests of Independence and Homogeneity.
5. Execute One-Way ANOVA tests.
6. Make students aware of the basic Non Parametric tests.
7. Cover in detail all aspects of Time Series Analysis.
8. Be able to use the SPSS package efficiently.

Course Contents:

1. Hypothesis Testing for the value of the Population Mean and the Proportion.
2. Hypothesis Testing for the difference of two Population Means (Independent Samples).
3. Linear Correlation and Regression.

4. Multiple Regression.
5. Chi-Square Tests of Independence and Homogeneity.
6. One-Way ANOVA.
7. Non Parametric Statistics.
8. Introduction to Time Series Analysis.
9. The SPSS package.

Learning Activities and Teaching Methods:

Lectures, Lab Presentations, Lab Tutorials, Practical Exercises and Assignments.

Assessment Methods:

Mid-Term Exam; Final Exam; Assignments; Projects; Class Participation.

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Brace and Brace	Understandable Statistics	Wiley	2005	0-618-94992-5

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Keller and Warrack	Statistics for Management and Economics	Thompson	2003	0-534-49123-5