UNIVERSITY of NICOSIA

Course Syllabus

Course Code	Course Title	ECTS Credits
MBAN-530DE	Foundations in Statistics and Research	0
Prerequisites	**Department**	**Semester**
None	School of Business	Fall, Spring
Type of Course	**Field**	**Language of Instruction**
Foundation	Statistics	English
Level of Course	**Lecturer(s)**	**Year of Study**
2nd Cycle	Prof. Haritini Tsangari	1st
Mode of Delivery	**Work Placement**	**Corequisites**
Distance Learning	N/A	None

Course Objectives:

The main objectives of the course are to:

- Introduce students to the basic principles of Statistics
- Provide the foundations to quantitative methods for business.
- Prepare students by giving them the necessary tools needed for the core course in quantitative methods, MBAN-603, Decision Making methods and tools
- Make students appreciate the importance of statistical methods in business
- Make students able to interpret statistical output.

Learning Outcomes:

After completion of the course students are expected to be able to:

1. **Use the basic concepts of graphical analysis** (students should be able to create and explain graphs and tables that are appropriate for different types of data).
2. **Compute basic descriptive statistics** (students should be able to explain the concept of statistical measures and compute measures of central tendency and variation from data).
3. **Utilize the basic concepts of probability theory** (students should compute classical and empirical probabilities).
4. **Handle discrete probability distributions** (students should explain what a random variable is, calculate expected value and variance of a random variable and compute

probabilities for various discrete distributions).

5. **Use the normal random variable to compute probabilities** (students should use the standard normal variable and transform any normal variable into standard in order to use for real-life problems).
6. **Develop the ability to summarize and present data in a professional way** (students should be able to look beyond the numbers and interpret the numerical results according to the business problem they are dealing with).

Course Content:

1. **Introduction to Statistics and Graphical Data Analysis:** data collection methods, questionnaire design, types of data. Graphical Data Analysis for categorical and numerical data: creation and interpretation of graphs and tables. Graphical data analysis for two numerical variables: cross tabulations and scatter diagrams.
2. **Measures:** measures of central tendency or location, measures of variation, measures of the association between two variables.
3. **Probability Theory and Discrete Probability Distributions:** Classical and Empirical Probability, basic relations of probabilities, mutually exclusive and independent events. Discrete Probability Distributions: random variables, distribution requirements, expected value, variance.
4. **Continuous Distributions: Normal and Standard Normal:** the normal and standard normal random variable, computation of probabilities for real life data with the use of the z-score obtained from the transformation of a normal random variable.

Learning Activities and Teaching Methods:

1. Lecturer's notes and articulate presentations and recordings
2. Exercises for practice
3. Course forum, On-line Discussion and chats on Moodle Platform
4. Tutorials

Assessment Methods:

Final Exam

Required Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Statistics for Business and Economics	Newbold, P., Carlson, W.L. and Thorne, B.	Pearson Education	2013	978-0-273-76706-0

Recommended Textbooks / Readings:

Title	Author(s)	Publisher	Year	ISBN
Basic Statistics for Social Research	Hanneman, R.A., Kposowa, A.J. and Riddle M.D.	John Wiley & Sons	2013 (8th edition)	978-1-118-23415-0 (E-book)