



Course Code MBA-530	Course Title Foundations in Statistics and Research	ECTS Credits None
Department School of Business	Semester Fall, Spring	Prerequisites None
Type of Course Foundation	Field Statistics	Language of Instruction English
Level of Course 2 nd Cycle	Year of Study 1st	Lecturer(s) Dr Haritini Tsangari
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:

- 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, MBA 604, 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 probability).
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 their 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 Contents:

- 1. Data and Statistics:** data collection methods, questionnaire design, types of data.
- 2. Graphical Data Analysis:** creation and interpretation of graphs and tables according to the type of data in hand.
- 3. Descriptive Statistics:** Measures of Central Tendency and Variation.
- 4. Probability Theory:** Classical and Empirical Probability.
- 5. Discrete Probability Distributions:** random variables, distribution requirements, expected value, variance, some common discrete probability distributions.
- 6. Continuous Probability Distributions:** the normal random variable, transformation to a standard normal and computation of probabilities.

Learning Activities and Teaching Methods:

Lectures, Assignments, Handouts, In-Class Exercises and real-life examples.

Assessment Methods:

Homework/ Assignments, Final examination

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Newbold, P., Carlson, W.L. and Thorne, B.	Statistics for Business and Economics	Pearson Education	2010	0-13-507248-4

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Anderson, D. R., Sweeney, D. J. and Williams, T.A.	Statistics for Business and Economics	Thomson Learning	2002	0-324-06671-6
Keller, G and Warrack, B.	Statistics for Management and Economics	Thomson Publications	2003	0-534-49123-5