

Module Title: Statistics A

- **Type of Module:**

√	PC (Prescribed Core Module)
	PS (Prescribed Stream Module)
	ES (Elective Stream Module)
	E (Elective Module)

- **Level of Module**

Undergraduate

- **Year of Study**

1

- **Semester**

B

- **Number of credits allocated**

5

- **Name of lecturer / lecturers : Eleni Gaki**

- **Description:**

Statistics is associated with the collection, processing, analysis and interpretation of data derived from observations or measurements which refer to natural, economic or social phenomena. In many natural, economic, social and business problems decisions are taken under uncertainty. In these cases statistics is a valuable tool in supporting decisions and actions and for this reason is used in many disciplines and practical problems. This course covers the Descriptive Statistics, Elements of Probability Theory and issues of Parametric Statistical Inference.

- **Prerequisites:**

Adequate knowledge of Mathematics

- **Module Contents (Syllabus):**

- Introduction to Statistics
- Data Collection
- Data Summarization: Graphical and Mathematical Methods
- Introduction to Probability Theory
- Random Variables – Probability Distribution
- Specific Probability Distributions (Discrete and Continuous)
- Sampling Distributions
- Point Estimation
- Confidence Intervals
- Hypothesis Testing

- **Recommended Reading:**

A) Principal Reference:

- ✓ Angelis, V, Dimaki K., *Statistics Part A': Statistics, Probabilities, Statistical Inference*, Sofia Publ.,Thessaloniki, 2011 (in Greek).

B) Additional References:

- Aczel, A. D. and Sounderpandian, J., *Complete Business Statistics*, McGraw – Hill & Irwin, 2002
- Anderson, D.R., Sweeney, D.J. and Williams., T.A. *Statistics for Business and Economics*, West Publishing Company, Minneapolis, 1993
- Berenson, M. L. and Levine, D. M. *Basic Business Statistics*, Prentice – Hall, Inc. New Jersey, 1992.
- Berenson, M. L., Levine, D. M. and Krehbiel, D. C., *Basic Business Statistics. Concepts and Applications*, Prentice – Hall Inc. New Jersey 2002
- Field, A., *Discovering Statistics using SPSS*, Sage Publications, 2009
- Kazmier, L.J. *Business Statistics, Schaum's Outlines*. Mc Graw – Hill, New York, 1988
- Kazmier, L. J. and Pohl, N. F. *Basic Statistics for Business and Economics*, Mc Graw – Hill International Editions, New York, 1987.
- Levine, D.M., Berenson, M. L. and Stephan, D. *Statistics for Managers*, Prentice-Hall Inc. New Jersey, 1999.
- Mendenhall, W., Beaver, R.J. and Beaver, B.M. *Introduction to Probability and Statistics*, Duxbury, Press, California, 1988
- Sincich, T. *Business Statistics by Example*, Maxwell MacMillan Co., Toronto, 1992.

- **Teaching Methods:**

- Lectures
- Presentations in the eclass
- Notes
- Tutorials

- **Assessment Methods:**

- Final Exam (100%).

- **Language of Instruction:**

Greek

- **Module Objective (preferably expressed in terms of learning outcomes and competences):**

Upon completion of the learning process the student will be able

- ✓ To organize and present a group of data by using the principles of graphical methods
- ✓ To use the values of statistical measures in order to summarize a set of data
- ✓ To use the values of statistical measures in order to assess the parameters of the population under study