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Course title	**Introduction to Statistics**				
Course code	**STAT107**				
Course type	**Theoretical,Compulsory Course**				
Level	Undergraduate				
Year / Semester	Year **1** Semester **1**				
Teacher's name	Dr. Kyriakou Sofia				
ECTS	4	**Lectures / week**	2	**Laboratories / week**	
Course purpose and objectives	The emphasis of the course is on the application of statistical methods in management, economics and the social sciences. Attention will focus on the interpretation of tables and results and the appropriate way to approach statistical problems.				
Learning outcomes	After the completion of the course students are expected to: • Become familiar with the key ideas of statistics that are accessible to a student with a moderate mathematical competence • be able to routinely apply a variety of methods for explaining, summarising and presenting data and interpreting results clearly using appropriate diagrams, titles and labels when required • Be able to summarise the ideas of randomness and variability, and the way in which these link to probability theory to allow the systematic and logical collection of statistical techniques of great practical importance in many applied areas • Have a grounding in probability theory and some grasp of the most common statistical methods • Be able to perform inference to test the significance of common measures such as means and proportions and conduct chi-square tests of contingency tables • Be able to use simple linear regression and correlation analysis and know when it is appropriate to do so				
Prerequisites	None		**Required**	None	
Course content	• **Basic background:** Elementary summation signs, elementary probability, Venn and tree diagrams. • **Data collection:** Elements of survey design, the stages of a survey, ideas of randomness, observation and experiment. • **Data presentation and analysis:** Descriptive statistics, measures of location and dispersion, pictorial and graphical representation. • **The Normal Distribution:** Estimation of mean, proportion, standard deviation, confidence intervals and hypothesis testing. Ideas of testing for differences between means and proportions. The use of Student's t.				

	• **Goodness of fit:** The chi-square distribution and contingency tables. • **Regression and correlation:** An introduction to the ideas of regression and correlation, least squares, estimation of a, b, and r, scatter diagrams
Teaching methodology	The course content will be taught using: • Power Point presentations • Guided discussions with the active participation of students • Examples and case studies that relate to the content of the course • Question and answer section • Use of internet and related IT infrastructure • Use of video projector and whiteboard • Use of calculator
Bibliography	**Greek Bibliography** • Χλουβεράκης, Γ.(2012),Εισαγωγή στη στατιστική : Περιγραφικές μέθοδοι και εφαρμογές, Πεδίο, ISBN: 9789605460532 • Μπακούρα, Α.(2016), Εισαγωγή στη Στατιστική, Δίσιγμα, ISBN: 978-960-9495-29-5. **English Bibliography** • DAVIES, A.(2017), Understanding Statistics : An Introduction. Washington, D.C.: Libertarianism.org Press, ISBN 9781944424350. **EBSCOhost** • Carlson, K.A., Winquist, J.R. (2018),An introduction to Statistics: An active learning approach 2nd ed. SAGE, ISBN:9781483378732 • Carlson, K.A., Winquist, J.R.(2018), An introduction to statistics : An active learning approach 2nd ed. SAGE, ISBN:9781483378732.
Assessment	• Attendance and Class Participation: 10% • Intemediate Written Examination: 30% • Final Written Examination: 60%
Language	English or Greek