Course unit title:	Statistics II
Course unit code:	MAT 202
Type of course unit:	Compulsory
Level of course unit:	Bachelor (1st Cycle)
Year of study:	2
Semester when the course unit is delivered:	1
Number of ECTS credits allocated:	6
Name of lecturer(s):	Dr Neophytos Mikellides
Learning outcomes of the course unit:	• Apply the theory of probabilities and probability distributions to problems concerning use of multiple random variables, the joint density function, and identically distributed random variables. • Solve problems using Student's t and Snedecor's F Distributions. • Use methods for finding estimators, such as Method of Moments, Maximum Likelihood Estimators, and Bayes Estimators. • Identify the necessity of evaluating estimators. • Solve real-life problems using contingency tables, chi-squared test and conditional and marginal odds ratio. • Use various methods for sampling, such as sampling with and without replacement, and explain stratified random sampling. • Draw statistical inference. • Assess associations between two or more categorical variables.
Mode of delivery:	Face-to-face
Prerequisites and co-requisites:	**Pre-requisite:** MAT 201
Recommended optional programme components:	None
Course contents:	This course provides a continuation of the concepts taught in Statistics I (MAT 201). Based on the theory built up to this point, new material will be introduced in more depth. Except from parametric statistics, non-parametric methods and tests will be taught. Categorical data will be investigated as well as sampling methods. This course is suitable for students with some probability background who would be able to understand the central core of statistical inference. The techniques covered in this course are ones that are used in consulting and are helpful in analysing and inferring from actual problems.
Recommended or required reading:	**Required reading:** Levine, D. et al. (2010). *Business Statistics: A First Course.* 5th Edition. Pearson Education.
Planned learning activities and teaching methods:	Lectures, homework.
Assessment methods and criteria:	Class Participation: 5% Assignment: 10% Mid-Term Test: 15% Final Examination: 70%
Language of instruction:	English
Work placements:	No