Course Title	Statistical Applications in Business				
Course Code	TMAT-202				
Course Type	This course serves as both Elective and Requirement, according to the program.				

Hospitality Bachelor	Math Requirement
Business Diploma/ Bachelor	Mth Requirement
All Programs	General Elective

Level	Bachelor (1st Cycle)				
Year / Semester	Year 2, B' Semester				
Teacher's Name	Mariana Pelekanos				
ECTS	4	Lectures / week	3	Laboratories / week	
Course Purpose and Objectives	This unit provides a broad introduction to statistical theory, concepts and data analysis techniques. The unit focuses on an understanding of probability theory, randomness and variability with the development of statistical practice illustrated by a study of those techniques most commonly used in the business and hospitality industries. Specifically, this course analyzes and presents business data and other statistical information and helps students understand the principles and the usefulness of probabilities.				
Learning Outcomes	Upon completion of this course students will be able to: 1. Define basic terms in the areas of business calculus and financial mathematics. 2. Comprehend the importance of statistical modeling in decision making and problem solving 3. Recognize and apply a variety of methods for summarizing, presenting and interpreting data clearly 4. Identify and apply standard probability models to solve a variety of problems 5. Use inferential methods to test hypotheses about population parameters (means, proportions, correlations) 6. Fit and test simple linear regression models to data 7. Apply advanced statistical models and methods to solve managerial and business problems.				

Prerequisites	TMAT 102 College Algebra or TMAT-120 Business Mathematics	**Required**	

Course Content	1. Data Collection, statistical diagrams and summary statistics
	    a. Data and statistics
	    b. Descriptive statistics: tabular and graphical presentations
	    c. Descriptive statistics: numerical measures
	2. An introduction to the basics of probability theory
	    a. Introduction to probability
	    b. Discrete probability distributions
	    c. Continuous probability distributions
	3. Discrete and continuous random variables and the theory of expectation
	4. Sampling distributions, confidence intervals and hypothesis testing.
	5. Exploring associations between both numeric and categorical variables
	6. An introduction to linear regression analysis
	7. The use of software (Excel, Minitab) to describe and analyse data and solve problems		

Teaching Methodology	The course is delivered through lectures, tutorials, exercises and computerized practice.		
Mode of delivery	Face to face.		
Bibliography	**Required**		
	1. Anderson, D., Sweeney, D. and Williams, T. (2014) Statistics for Business and Economics, 12th ed., West Publishing.		
	Recommended		
	1. Lind, D., Marshal, W. and Mason, R. Statistical Techniques in Business and Economics, 11th ed., McGraw Hill, 2002. 2. Hogg, R. Probability and Statistical Inferences. 6th ed., Prentice Hall, 2001.		
Assessment	The following assessment methods are employed to assess this course:		

30 – 50 %	Final Exam
20 – 40 %	Mid –Term / Tests / Quizzes
10 – 30 %	Assignments / Projects
0 – 10 %	Class Attendance & Participation

Language	English