Course Code	Course Title	ECTS Credits
MATH-221DG	Statistics I	6
Department	**Semester**	**Prerequisites**
Computer Science	Fall, Spring	None
Type of Course	**Field**	**Language of Instruction**
Core	BBA DL Greek	Greek
Level of Course	**Year of Study**	**Mode of Delivery**
1st Cycle	2nd	Distance Learning
Work Placement	**Lecturer**	**Co-Requisites**
N/A	Dr Stavros Pouloukas	None

Objectives of the Course:

The main objectives of the course are to:

1. Make students aware of the concept of measures of central tendency and variation.
2. Make students aware of elementary probability theory.
3. Cover in detail all aspects of the binomial and the normal random variables and distributions.
4. Thoroughly discuss estimation and hypothesis testing.

Learning Outcomes:

1. Explain the meaning of statistical measures and compute measures of central tendency and variation from data.
2. Solve basic theoretical and empirical probability problems
3. Demonstrate the basic concept of discrete and continuous random variables.
4. Compute Probabilities for the binomial distribution and for the normal distribution.
5. Compute confidence intervals.
6. Execute hypothesis testing on the value of the population mean.

Course Contents:

- Descriptive Statistics: Measures of Central Tendency and Variation.
- Classical and Empirical Probability.
- Discrete probability distributions: the binomial random variable.
- Continuous probability distributions: the normal random variable.
- Sampling distribution of the Mean.
- Estimation and Confidence Intervals.
- Introduction to Hypothesis Testing.

• Hypothesis Testing for the value of the population mean.

Learning Activities and Teaching Methods:

Online Tutor-led Lecturing, Online Video/PDF Tutorials, Case Studies, Assignment, Online Interactions (Forums and Chats).

Assessment Methods:

Tests
Final Exam

The course includes nine (9) hours of tutorials. Your course lecturer will be delivering the specific tutorials which will be announced in due course throughout the semester. Participation in these tutorials is recommended as they will assist you in successfully completing your course.
Three tutorials of three (3) hours each will be delivered throughout the semester. The specific tutorials will be delivered in the form of face-to-face sessions which will simultaneously be delivered lived live through Web-Ex (a web conferencing system where allows students' participation). The specific live sessions will be recorded. The recordings will be also available for reviewing throughout the semester.

Required Textbook:

Authors	Title	Publisher	Year	ISBN
Charles Henry Brase, Corrinne Brase	Understandable Statistics	Wiley	2016	978-1285460918

Recommended Textbooks:

Authors	Title	Publisher	Year	ISBN
Keller, Warrack	Statistics for Management and Economics	Thompson	2016	978-1337093453