UNIVERSITY of NICOSIA

Course Code	Course Title	ECTS Credits
MATH-221N	Statistics I	6
Prerequisites	**Department**	**Semester**
None	Life and Health Sciences	Spring
Type of Course	**Field**	**Language of Instruction**
Required	Biostatistics	English
Level of Course	**Lecturer(s)**	**Year of Study**
1st Cycle	Maria Efthymiou	3rd
Mode of Delivery	**Work Placement**	**Co-requisites**
Face-to-face	N/A	None

Objectives of the Course:

The main objectives of the course are to:
- Introduce students to statistical methods with emphasis on the application of statistical ideas
- Introduce students to methods to make them aware of clinical trials and their importance in science as well as interpret results.
- The format of the course will consist of a 5h/week lectures in weeks 1-5, 12 and 13.

Learning Outcomes:

After completion of the course students are expected to be able to:
- Present a hypothesis; understand statistical concepts and statistical procedures in descriptive and quantitative research.
- Be able to apply statistical calculations to solve problems based on clinical studies.
- Interpret results.
- Review, compare and contrast papers on the statistical methods used on various areas of clinical studies.

Course Contents:

- Introduction to statistics: difference between population and sample, types of data, data sources, sampling methods
- Phase I – Phase IV trials – when each is used. Randomized and observational studies.
- Summarizing numerical and categorical data

- Probabilities and probability distributions (especially normal distribution)
- Confidence intervals
- Hypothesis testing
- Correlation
- Regression
Chi-squared test

Learning Activities and Teaching Methods:

Lectures, Group work

Assessment Methods:

Laboratory Practical Sessions, Tests, Final Examination

Required Textbooks / Reading:

Title	Author(s)	Publisher	Year	ISBN
Medical statistics: A textbook for the health sciences	MJ. Campbell, D. Machin	Wiley	2007	978-0-470-02519-2

Recomended Textbooks / Reading:

Title	Author(s)	Publisher	Year	ISBN
Biostatistics (Basic Concepts and methodology for the Health Sciences)	W. W. Daniel	Wiley	2010	978-0-470-413333
Statistics for People Who (Think They) Hate Statistics with SPSS Student Version 13.0	N.J. Salkind	Sage	2007	141295150X
An introduction to medical statistics	M. Bland	Oxford University Press	2000	9780192632692