Course Title	**Biostatistics**				
Course Code	MD115				
Course Type	Compulsory				
Level	1st Cycle (MD)				
Year / Semester	1st Year / 1st Semester				
Teacher's Name	TBA				
ECTS	6	Lectures / week	2 Hrs / 14 weeks	Laboratories / week	3 Hrs / 14 weeks
Course Purpose and Objectives	This course is intended to provide an introduction to statistical methods and reasoning. Students will understand the concept of sampling variation and its critical role in the construction of confidence intervals and hypothesis testing. The statistical methods will be applied to simple medical datasets using the statistical software SPSS and results will be interpreted.				
Learning Outcomes	Upon successful completion of this course students should be able to: • Demonstrate expertise regarding the basic concepts of biostatistics and their applications to medical science. • Interpret the findings of the most frequently used statistical methods in medical science. • Critically review the statistical methods and results of clinical trials presented in published articles • Manage a personal computer independently and demonstrate that they can carry out the most common statistical methods and techniques.				
Prerequisites	None		Co-requisites	None	
Course Content	In that regard, students will familiarize themselves with: • Basic concepts and types of data • Describing data with tables and charts • Describing data with numeric summary values • Probability and Normal distribution • Confidence interval for a population mean • Estimating the difference between two parameters • Testing hypotheses about the difference between two population parameters				

	• Testing hypotheses about the ratio of two population parameters and the x2 test • Measuring the association between two numerical variables • Straight line models: linear regression • Power and sample size in study designs **Laboratory exercises:** • Data manipulation • Frequency tables and histograms • Descriptive summary measures and box-plot • Normal distribution and z-scores • Distribution of sample means and standard error • Confidence interval for a population mean • Estimate the difference between the means of two independent populations • Independent samples t-test and ANOVA • Association between two categorical variables and the x^2 test • Correlation coefficients • Linear regression
Teaching Methodology	Face- to- face
Bibliography	Bowers David *Medical Statistics from Scratch: An introduction for Health Professionals.* Second Edition, John Wiley & Sons, Kirkwood Betty, Sterne Jonathan *Essential Medical Statistics.* Second Edition, Blackwell Science Petrie A, Sabin C *Medical Statistics at a glance.* Third Edition, Wiley-Blackwell
Assessment	Examinations: 70% Assignment/Lab 20% Class Participation: 10%
Language	English