

M.Sc. PROGRAMME in “BIOINFORMATICS”**MODULE PROGRAMME SEMESTER A
NOVEMBER 2011 – FEBRUARY 2012****STATISTICS IN BIOINFORMATICS (17:30–21:30)**

DATE	LECTURE	LECTURERS
Friday 04/11/2011	Sample space and events. Probabilities of events. Basic counting rules. Permutations, combinations. Conditional Probability. Theorem of total probability and Bayes’ theorem. Stochastic independence.	Dr. Sotiris Bersimis
Friday 11/11/2011	Random variable. Probability density function and cumulative density function. Discrete and continuous random variables. Distribution of a random variable. Mean and variance.	Dr. Sotiris Bersimis
Friday 18/11/2011	Bernoulli distribution. Binomial distribution. Geometric distribution. Pascal distribution. Hypergeometric distribution. Poisson distribution. Uniform distribution. Exponential distribution. Erlang distribution. Normal distribution. Central Limit Theorem.	Dr. Sotiris Bersimis
Friday 02/12/2011	Introduction to Biostatistics. Hypothesis testing. Chi-squared test. Applications in STATA (Computer lab 1).	Dr. Stefanos Bonovas Dr. Georgios Nikolopoulos
Friday 09/12/2011	T-test. Analysis of Variance (ANOVA). Non-parametric methods. Applications in STATA (Computer lab 2).	Dr. Stefanos Bonovas Dr. Georgios Nikolopoulos
Friday 16/12/2011	Correlation (Pearson and Spearman). Linear regression. Logistic regression. Applications in STATA (Computer lab 3).	Dr. Stefanos Bonovas Dr. Georgios Nikolopoulos
Friday 23/12/2011	Survival analysis. Applications in STATA (Computer lab 4).	Dr. Stefanos Bonovas Dr. Georgios Nikolopoulos
Friday 13/01/2012	Meta-analysis. Applications in STATA (Computer lab 5).	Dr. Stefanos Bonovas Dr. Georgios Nikolopoulos