

<b>M.Sc PROGRAMME in «BIOINFORMATICS»</b>		
<b>MODULE PROGRAM SEMESTER A</b>		
<b>OCTOBER 2005 – FEBRUARY 2006</b>		
<b>STATISTICS IN BIOINFORMATICS (16:00-19:00)</b>		
<b>DATE</b>	<b>LECTURE</b>	<b>LECTURERS</b>
<b>Wednesday 19/10/2005</b>	<i>Sample space and events. Probabilities of events. Basic counting rules. Permutations, combinations. Conditional Probability. Theorem of total probability and Bayes' theorem. Stochastic independence.</i>	Assoc. Prof Charalampos Damianou
<b>26/10/2005</b>	<i>Random variable. Probability density function and Cumulative density function. Distribution of a random variable. Mean and variance. Discrete random variables.</i>	Assoc. Prof Charalampos Damianou
<b>2/11/2005</b>	<i>Continuous random variables.</i>	Assoc. Prof Charalampos Damianou
<b>9/11/2005</b>	<i>Approximation of the Binomial and Poisson distributions by the Normal distribution. Central Limit Theorem and applications.</i>	Assoc. Prof Charalampos Damianou
<b>16/11/2005</b>	<i>Frequency distributions of qualitative and quantitative characteristics. Measures of central tendency and variability, symmetry and kurtosis. Coefficient of variation. Plots.</i>	Assoc. Prof Charalampos Damianou
<b>23/11/2005</b>	<i>Inference, confidence intervals</i>	Assoc. Prof Charalampos Damianou
<b>30/11/2005</b>	<i>Hypothesis testing. Type I and II error rates. Power. Test for the mean of a normal distribution. Z-test, t-test.</i>	Assoc. Prof Charalampos Damianou
<b>7/12/2005</b>	<i>Comparison of means and variances for two populations, t-test, F-test, Wilcoxon-Mann-Whitney test.</i>	Assoc. Prof Charalampos Damianou
<b>14/12/2005</b>	<i>The STATA statistical package.</i>	Assoc. Prof Charalampos Damianou/ Dr. Pandelis Bagos
<b>21/12/2005</b>	<i>The criterion <math>\chi^2</math> and applications.</i>	Assoc. Prof Charalampos Damianou
<b>11/01/2006</b>	<i>Simple and multiple linear regressions. Coefficient of Correlation (Pearson's and Spearman's).</i>	Assoc. Prof Charalampos Damianou
<b>18/01/2006</b>	<i>Practical data analysis using PC.</i>	Assoc. Prof Charalampos Damianou / Dr. Pandelis Bagos