

## Scuola Unica di dottorato

### Informazioni sui corsi trasversali (syllabus)

Teachers	Daniela Besozzi, Università di Milano-Bicocca Paolo Cazzaniga, Università di Bergamo Marco S. Nobile, Università di Milano-Bicocca
Title:	Fundamentals of Biostatistics
Language	English
Typology of proposal	Cycle of lectures + lab sessions
CFU	2 CFU
Hours (in class)	8 hours in class + 8 in computer lab
Objectives	<p>The course will introduce the basic concepts of statistics for the analysis of biological data. The objectives of the course are the development of critical ability and practical skills concerning:</p> <ol style="list-style-type: none"> <li>1) the choice of the proper statistical methods and the interpretation of analysis outcomes;</li> <li>2) the automatic organization and handling of biological data by means of spreadsheets.</li> </ol> <p>The course is mainly addressed to PhD students of the life sciences area. Suggested year of attendance: I</p>
Short description of contents	<p>The main concepts and methods of statistics will be presented and critically discussed. Hands-on sessions in computer lab will provide practice on the use of spreadsheets for statistical analysis of biological data.</p> <p>Topics:</p> <ul style="list-style-type: none"> <li>• Descriptive statistics</li> <li>• Probability theory and probability distributions</li> <li>• Inferential statistics             <ul style="list-style-type: none"> <li>- Sampling distributions</li> <li>- Correlation and regression</li> <li>- Hypothesis testing (p-value)</li> <li>- Multisample inference (ANOVA)</li> </ul> </li> </ul>
Method	Lectures + hands-on sessions in computer lab
Evaluation	Final test consisting in multiple choice questions
Specific needs for teaching	Projector, microphone, computer lab, Excel
Participants (min/max)	<b>5-20</b>
Calendar	June 11-15, 2018 or June, 2018
Notes:	