

生物統計學 Biostatistics

科號		組別		學分	3	人數限制	30
修課年級	<input type="checkbox"/> 大學部 二 年級以上 <input type="checkbox"/> 碩士班一年級以上(含博士班) <input type="checkbox"/> 碩士班二年級以上(含博士班)						
上課時間	星期四 678			教室	220 + 109		
科目中文名稱	生物統計學						
科目英文名稱	Biostatistics						
任課教師	張筱涵						

一、課程說明	This 3-credit course is designed for undergraduate students pursuing a biology major. The course format includes a lecture portion covering statistical concepts that are relevant for analyzing biological data, and a computer laboratory component covering usage of R software to perform the analyses described in lecture. It assumes no previous coding experience in R or any other programming language.
二、指定用書	Michael C. Whitlock and Dolph Schluter. 2014. <i>The Analysis of Biological Data (Second Edition)</i> . Roberts and Company Publishers, Greenwood Village, Colorado. (ISBN-10: 1936221489)
三、教學方式	Lecture and computer laboratory
四、教學進度	02/25 Course overview and introduction to statistics 03/04 Data visualization 03/11 Probability distributions 03/18 Inference from samples 03/25 Hypothesis testing 04/01 Goodness-of-fit test and contingency analysis 04/08 Normal distribution and one-sample inference 04/15 Comparing two means 04/22 Midterm 04/29 Non-parametric tests 05/06 Analysis of variance 05/13 Correlation and regression I 05/20 Correlation and regression II 05/27 Project presentation 06/03 Likelihood analysis 06/10 Bayesian analysis 06/17 Computationally-intensive methods 06/24 Final exam
五、成績考核	Problem sets: 40%; Midterm: 20%; Final: 25%; Project presentation: 15%