



課 綱 Course Outline
生命科學系學士班

中文課程名稱 Course Name in Chinese	生物統計學				
英文課程名稱 Course Name in English	Biostatistics				
科目代碼 Course Code	LF_20400	班 別 Degree			
修別 Type	選修 Elective	學分數 Credit(s)	3.0	時 數 Hour(s)	3.0
先修課程 Prerequisite					
課程目標 Course Objectives					
<p>Course description:</p> <ul style="list-style-type: none"> • An introduction to the use of statistical analysis in microbiome studies. • Provides an understanding of the basic methods and underlying concepts of statistics that are used in analyzing microbiome data. • Among topics explored are descriptive statistics, probability, sampling, hypothesis testing and non-parametric statistics. <p>Course Content:</p> <ul style="list-style-type: none"> • Introduction to Microbiome • Bacterial Identification • Fundamentals of Biostatistics • Summaries of data • Hypothesis test: type I/II error, power • p-value/ Estimation/ SE/ 95% CI • T-test/ ANOVA/ Wilcoxon rank sum test • Chi-square test/ Fisher' s exact test • Linear regression • Scientific writing skills 					
系教育目標 Dept.'s Education Objectives					
1	培養從事生命科學相關領域之人才 Cultivating talents engaged in life science				
2	培育學生具有自我學習、獨立思考與創新之能力 Fostering students to acquire the capabilities of self-learning, independent thinking, and innovation.				

系專業能力 Basic Learning Outcomes		課程目標與系專業能力相關性 Correlation between Course Objectives and Dept.'s Education Objectives
A	具備生命科學相關學科之基礎知識 Having the basic knowledge of life science.	●
B	具備邏輯分析與解決問題的能力 Having the capabilities of logical analysis and problem solving.	○
C	具備資料整合、數據分析與書面及口頭報告之能力 Having the capabilities of data integration and analysis, and the skills of written and poster presentation.	
D	具備終生學習的能力 Having the capability of lifelong learning.	○
圖示說明Illustration : ● 高度相關 Highly correlated ○ 中度相關 Moderately correlated		
課程大綱 Course Outline		
資源需求評估 (師資專長之聘任、儀器設備的配合 . . . 等) Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)		
課程要求和教學方式之建議 Course Requirements and Suggested Teaching Methods		
其他 Miscellaneous		