

Biostatistics	
Course Code	DIC 8012
Credits	Three (lectures: 3 hr per week)
Organizers	Dr. Pei-Jen Lee Shaner
Lecturers	Dr. Pei-Jen Lee Shaner, Dr. Mao-Ning Tuanmu
Time	14:20-17:20, Wednesday
Place	Room B208, BRC, AS
Prerequisites	None
Description	This course aims to provide students tools for analyzing biological datasets and hypothesis testing. After this course, the students should have a firm understanding of basic statistical methodology used in biology.
Objectives	<ol style="list-style-type: none"> 1. Lectures are designed to provide students statistical tools for analyzing biological datasets. 2. Students will apply the methodologies learned in lectures to aid their research.
Grade	Quiz 60% Final project 40% (re-analyzing and commenting on published work)
Reference	The Analysis of Biological Data, 2 nd Edition, by Michael C Whitlock and Dolph Schluter, Roberts and Company Publishers, Greenwood Village, Colorado, USA

Date	Topic
2/22	Week 1 A brief introduction to statistics
3/1	Week 2 Displaying and describing data I
3/8	Week 3 Displaying and describing data II
3/15	Week 4 Probability
3/22	Week 5 Hypothesis testing
3/29	Week 6 Proportions, frequencies and categorical data analysis I
4/5	Week 7 Proportions, frequencies and categorical data analysis II
4/12	Week 8 (Quiz #1) Analyzing normal populations I
4/19	Week 9 Analyzing normal populations II
4/26	Week 10

	Analyzing normal populations III
5/3	Week 11 (Quiz #2) Correlation and regression I
5/10	Week 12 Correlation and regression II
5/17	Week 13 Correlation and regression III
5/24	Week 14 (Quiz #3) Computer intensive methods
5/31	Week 15 Likelihood
6/7	Week 16 Independent project I
6/14	Week 17 Independent project II
6/21	Week 18 Independent project III