Biomedical Statistics (生物醫學統計)

Semester: Spring 2016

Program: Translational Medicine Degree Program

Place: ISS 308

Time: Wednesday, 10:00~12:00

Instructor: Dr.陳璿宇(Dr. Hsuan-Yu Chen) hychen@stat.sinica.edu.tw

Credit: 2

Teaching Assistant: 待更新

Aim: To learn and understand the fundamental statistical issue in translational medicine

Method: Lecture, discussion

Evaluation: homework 30% and final presentation 70%

Textbook: Handout in class

Week	Date	Lectures	Instructor
1	2/24	Descriptive statistics, gene expression data analysis	Hsuan-Yu Chen 陳璿宇
2	3/2	Probability, disease prevalence and risk assessment	Hsin-Chou Yang 楊欣洲
3	3/9	Binomial, hypergeometric and Poisson distributions; Contingency tables	Hsin-Chou Yang 楊欣洲
4	3/16	Normal and exponential distributions, survival time	Hsin-Chou Yang 楊欣洲
5	3/23	Parameter estimation and confidence intervals	Hsin-Wen Chang 張馨文
6	3/30	Hypothesis testing, statistical significance, p-value, and false discovery	Hsin-Wen Chang 張馨文
7	4/6	Comparative studies for quantitative measurements	Shinsheng Yuan 袁新盛
8	4/13	Regression and correlation	Shinsheng Yuan 袁新盛
9	4/20	Comparative studies for categorical data	Shinsheng Yuan 袁新盛
10	4/27	Introduction to high-throughput bio-molecular data	Hsuan-Yu Chen 陳璿宇
11	5/4	Study designs in biomedical research	Hsuan-Yu Chen 陳璿宇
12	5/11	Survival time analysis	Chen-Hsin Chen 陳珍信
13	5/18	Medical prediction, molecular signatures	Hsuan-Yu Chen 陳璿宇
14	5/25	Statistical graphics and data visualization	Chun-houh Chen 陳君厚
15	6/1	Student presentation	Hsuan-Yu Chen 陳璿宇

註：本課程額外由助教於原上課教室開設 R 軟體補充教學。(待更新)