
Fundamentals of Statistical Consulting – Semester 1, 2016

Unit Information Sheet

Practical: Tuesday 1-2pm (selected weeks) and other time on discussion with clients

Lecture: Wednesday 12-1pm

Lectures: Wed 12-1pm Carlaw 823 (Grid room)

- Week 1-6: Jean Yang (office 824, tel. 02 9351 3012, jean.yang@sydney.edu.au)
- Week 7-13: Jennifer Chan (office 817, tel. 02 9351 4873, jennifer.chan@sydney.edu.au)

Consultation: Tue 1-2pm Carlaw 830

Students, clients, Jean and Jennifer

Assessment

- 60% for final report and presentation
- 40% for weekly consulting reports

Course outline:

Benefit from consulting training. Interview guidelines. Problem formulation. Sample size determination. Missing values. Survival analysis. Cross validation. Case studies. Report writing. Other specific topics from consulting.

Reference books

There are no required textbooks for this unit. The following are some recommended reference books.

- *Statistical Consulting* by Javier Cabrera and Andrew McDougall, 2002, Spromg-Verlag.
- *Statistical Case Studies A Collaboration Between Academe and Industry* by Roxy Peck, Larry D. Haugh and Arnold Goodman, ASA-SIAM Series on Statistics and Applied Probability, SIAM.
- *Statistics Done Wrong, The Woefully Complete Guide* by Alex Reinhart, No Starch Press Inc.

Course topics:

Topics (*) are selected to address specifically the problems from the clients and hence will vary from year to year.

Week	Content
1	Introduction, overview and role plays
2	Accreditation, problem formulation and problem solving
3	Share of experience
4	*Factor analysis
5	Missing data
6	Cross validation
7	Share of consulting experience
8	*Complete and quasi-complete separation
9	*Association coefficients for binary data
10	*Comparison of two time series
11	Survival analysis: Kaplan Meier estimator
12	Sample size determination
13	Discussion, summary and feedback