



1 Introduction

This note gives you ideas of what to expect and gain from participating in a statistical consultation.

1.1 Learning outcomes

1. Able to communicate statistics to non-statisticians

Clients may be uncertain about their objectives and feel stress in performing statistical analyses. Statistical consulting requires good listening and communication skills, to find out how the data are collected, the questions of interest are formulated, and the data are analysed. This course provides you experience to communicate with clients and apply your statistical knowledge to solve real life problems.

2. Feel comfortable with clients in non-job environment

You may also feel stress in performing some statistical analyses. This course allows you to improve your skill and experience in a more relax and low stress environment with supports from your lecturers and classmates.

3. Gain confidence in solving real life problem

Statistics has a role to assist scientists and business in a variety of problems using scientific methods to formulate new theories and evaluating existing theories through data. This course provides you real contexts-where the statistical theories and techniques are used in practice. This is often not possible in traditional statistics units that are designed to teach statistical theories and methods simply in solving traditional assignment and examination questions.



4. Build up interdisciplinary network

Owing to the inter-disciplinary nature of statistics, it is important to understand how statistics interacts with other disciplines. Through statistical consultations, you are able to meet and work with people from a wide range of disciplines.

5. Be career ready with relevant work experience

Non-statisticians often interview applicants for many statistics-related jobs. Participating in this course provides you some real experience working with non-statisticians that you can talk about in a job interview. You will gain the sort of experience that employers want mostly.

1.2 Guideline and hints

1. Don't perform complete analyses for the clients

As a statistical consultant, your role is primarily an adviser not a doer. You may suggest appropriate statistical analyses, give brief descriptions of these analyses and provide some references and advices. It may be easy to perform some illustrative analyses but it is not always necessary to complete the whole analyses for them.

2. Don't expect to answer every questions

No matter how experienced or knowledgeable you are, you may come across questions that you can't answer or even understand. In this case, you should arrange another meeting to allow you time to gather information and prepare the answer in a more relaxed atmosphere. *Talk to your classmates, ask your lecturers and seek more information.*

3. Don't spend a long time with one client



The first consulting session would be about 10 to 20 mins. The second session would usually last for an hour at max. Sometimes one more meeting will be needed if you require help or need time to gather information.

4. Don't do assignment or project for your student clients

You should give enough advice to them so that they may complete their projects by themselves.

5. Treat clients and consultants with respect

Clients regardless of their background should also treat you with respect and appropriately acknowledge your help or advice in their projects.

6. Get information of the data and their background

Do not accept a graph or data set, or any interpretation of these, until you understand what variables are involved. Even if it may appear trivial to the clients, sometimes getting the clients to think more carefully about the variables they measured is already enough to solve their problems.

7. Write short report after each meeting

You should write notes/reports on the data and problem immediately after each consultation, not waiting till the next meeting.

8. Report your lecturer your progress regularly

If there are any problems you should inform the lecturer immediately.

1.3 Consultant's report

This report should be done jointly with the other statistical consultants or individually. The average length of a report should be about a few pages, and contain in general the following points:



Title

Consultant(s)

Date

1. Introduction

1.1 Background and Rationale (include details of clients)

1.2 Objectives (problems)

2. Executive Summary

3. Data Methods

3.1 Data Description

3.2 Statistical/Analytical Methods

4. Graphical Presentation

5. Result

6. Appendix