

STAT 4700/7290 Section A01

Statistical Consulting

Description The **goal** of the course is to provide training and experience in statistical consulting. We will discuss the role of the statistics consultant. Emphasis will be on consulting skills as well as statistical thinking. Students will be exposed to realistic statistical and scientific problems that appear in typical interactions between statisticians and clients (researchers, scientists, business people, etc.) Course work will involve in class discussions, meeting with clients, formulating approaches to problems posed by clients, analyzing data, writing reports, and oral presentations.

Prerequisites STAT 3800 or the former STAT 3600 (005.360) (C); and STAT 3480 (005.348); or consent of department. Prerequisites or concurrent requirements: STAT 4520 and STAT 4530.

Semesters Fall 2012 & Winter 2013

Time 9:30 AM–10:20 AM, M. W. F.

Location 316 Machray Hall

Web Page <http://home.cc.umanitoba.ca/~koulist/stat470729>

Instructor Dr. Theodoro Koulis
320 Machray Hall
Telephone: 474-8205
Email: theo.koulis@ad.umanitoba.ca

Office Hours M. T. W. 2:30 PM–3:30 PM (**AND** by appointment. Drop in and ask me any statistics related problem.)

Marks Classroom participation: 10%
Weekly write-ups: 10%
Presentations: 15%
Analysis of datasets: 25%
Consulting Project: 40%

Extensions for assignments and projects will not be given. **Note:** Extensions will be granted if additional work is required.

Schedule September-December: Techniques of statistical consulting:
· Role of the statistical consultant
· Communication Skills
· Case studies
· Write-ups, data analysis & discussions.

January-April: Statistical consulting:
· Data analysis project
· Consulting project
· Presentations of consulting projects

- References** J.R. Boen and D.A. Zahn, *The human side of statistical consulting*, Research Methods Series, Lifetime Learning Publications, 1982.
- J. Derr, *Statistical consulting: a guide to effective communication*, Statistics Series, no. v. 1, Duxbury Thomson Learning, 2000.
- J Cabrera and A McDougall, *Statistical consulting*, Springer, 2002.
- D.J. Hand and B. Everitt, *The statistical consultant in action*, Cambridge University Press, 1987.
- W.N. Venables and B.D. Ripley, *Modern applied statistics with S*, Statistics and computing, Springer, 2002.
- G. Der and B. Everitt, *A handbook of statistical analyses using SAS*, Chapman & Hall/CRC, 2002.

Note 1 It is important that you understand what constitutes academic dishonesty and that you are familiar with the very serious consequences. Links to resources that describe academic dishonesty (including plagiarism, cheating, inappropriate collaboration and examination impersonation) can be found at:

<http://umanitoba.ca/faculties/science/undergrad/resources/webdisciplinedocuments.html>

or through the Faculty of Science home page at:

<http://www.umanitoba.ca/faculties/science>.

Typical penalties imposed within the Faculty of Science for academic dishonesty are also described.

Note 2 It is your responsibility to ensure that you are entitled to be registered in this course. This means that you:

- have the appropriate prerequisites, as noted in the calendar description, or have an appropriate permission from the instructor to waive these prerequisites;
- have not previously taken, or are concurrently registered in, this course and another that has been identified as “not to be held with” in the course description.

The registration system may have allowed you to register in this course, but it is your responsibility to check. If you are not entitled to be in this course, you will be withdrawn, or the course may not be used in your degree program. There will be no fee adjustment. This is not appealable. Please be sure to read the course description for this and every course for which you are registered.