

# 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, possible meeting with clients, formulating approaches to practical problems (possibly 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 2014 & Winter 2015  
**Time** 9:30 AM–10:20 AM, M. W. F.  
**Location** 316 Machray Hall  
**Web Page** <http://home.cc.umanitoba.ca/~wangx1>

**Instructor** Dr. Xikui Wang  
321 or 338 Machray Hall  
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Email: [xikui.wang@umanitoba.ca](mailto:xikui.wang@umanitoba.ca)

**Office Hours** Mondays and Wednesdays 1:30 PM–3:00 PM (**OR** by appointment)

<b>Marks</b>	Classroom participation:	10%
	Assignments:	30%
	Presentation:	10%
	Analysis of dataset (report):	20%
	Consulting Project (report):	20%
	Consulting Project (presentation):	10%

There is no final exam. Extensions for assignments and projects will not be given. Extensions will be granted only if additional work is required.

**Schedule** September-December: Techniques of statistical consulting:  
· Role of the statistical consultant  
· Communication skills  
· Statistical thinking and problem solving  
· Case studies  
· Write-ups, data analysis & discussions.

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

- References** J. Spurrier. *The practice of statistics: putting the pieces together*, Duxbury Press, 1999.
- 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.
- G.J. Hahn and N. Doganaksoy, *A career in statistics - beyond the numbers*, Wiley, 2011.

**Note:** 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.