

## STAT8801, Statistical Consulting

2:30–3:20 MWF, Ford 150, Mpls Campus

### Instructor

Aaron Rendahl, 366 Ford, 612-625-8599 (Mpls) 612-625-1062 (StP), [arendahl@stat.umn.edu](mailto:arendahl@stat.umn.edu).

Office hours will be 1:15–2:15 MWF.

### Texts and Readings

While no book is required, there are several useful books including *Statistical Consulting* by Javier Cabrera and Andrew McDougall (2002), *Statistical Consulting: A Guide to Effective Communication* by Janice Derr (1999), *Human Side of Statistical Consulting* by James R. Boen and Douglas A. Zahn (1982), and *Statistical Rules of Thumb* by Gerald van Belle (2002).

There will be frequent handouts and occasional articles from the professional and popular press for reading.

### Class Web Page

All handouts and readings will be posted on the class webpage,

<http://www.stat.umn.edu/~arendahl/Teaching/STAT8801-2013Spring>.

### Curriculum

The course has five threads:

- **Communication:** verbal and non-verbal communication, asking good questions, effective writing, oral presentation, tables and graphs, publication
- **Professional practice:** working with clients, defining problems, interpersonal skills, operating a business, professional growth
- **Technical tools:** some techniques, but mostly thinking about and learning about new ideas, approaches, and techniques
- **Ethics:** the University requirements for ethics for all graduate students as well as ethics specific to statisticians and statistical consultants
- **Teamwork:** working with others to solve problems

### Course Grade

This course must be taken S/N. Grading will be based on the following:

1. Class attendance. Attendance is required. If you are unable to attend class on a given day, there will be a small assignment covering the day's material or activity. As a courtesy, please email me in advance. This is not meant as a choice, but as a recognition that as graduate students sometimes your research may take precedence. However, if you are unable to attend on a regular basis, I will ask you to consider retaking the class in a subsequent semester.
2. Class preparation. Some classes will require reading of an article or meeting together in a small group to discuss a case. For these classes, you will be required to bring a short summary of your thoughts to class. Specific details will be provided in advance. If you are unable to prepare for a given class, a written summary of the class will be expected instead.
3. Class participation. Without your input, this will be a very dull course. Speak up! However, that's hard to measure, so at the end of most classes, there will be a short writing assignment where you will be asked to summarize some aspect of that day's class.

4. Group consulting project. The class will be divided in five groups, who will interview a client about the case, analyze the data, write a report, and give a presentation. Details will be provided.
5. One basic data analysis, to be performed in at least three computing environments. Details to be provided.

### **Acknowledgments**

This course is based on a course developed by Douglas Hawkins and adapted and revised by Gary Oehlert in Fall 2007 and Sandy Weisberg in Spring 2008.

### **Disabilities**

Students with disabilities that affect their ability to participate fully in class or to meet all course requirements should bring this to my attention so that appropriate accommodations can be arranged. Further information is available from Disabilities Services (230 McNamara).

### **Scholastic misconduct**

Scholastic misconduct is broadly defined as “any act that violates the right of another student in academic work or that involves misrepresentation of your own work. Scholastic dishonesty includes, (but is not necessarily limited to): cheating on assignments or examinations; plagiarizing, which means misrepresenting as your own work any part of work done by another; submitting the same paper, or substantially similar papers, to meet the requirements of more than one course without the approval and consent of all instructors concerned; depriving another student of necessary course materials; or interfering with another student’s work.” In this class, a first instance of scholastic misconduct will result in a warning. Repeated misconduct will result in an F and will be reported to the appropriate University office.