



STAT 551, Statistical Consulting, 2019/2020 Term 1 Instructor: Harry Joe

Time and Place: MW 13:30-14:50, ESB 4192

Course description: Supervised statistical practice directed toward the solution of current problems posed by subject-area researchers.

Objectives: This course gives students practical experience in consulting and in the application of statistical thinking and techniques to current subject-area research problems. Students will apply the basic skills of consulting, developed in STAT 550, to problems posed by subject-area researchers in response to a widely distributed announcement of STAT 551. Course activities include meeting with clients, formulating approaches to clients' problems, making oral presentations, and writing reports summarizing results and recommendations.

Goals include the following

- Effectively communicate orally and in writing with non-statisticians so clients understand and can apply your advice
- Gain practical consulting experience from their clients as well as from other students' clients
- Get practice in making short presentations and writing short reports that focus on take-home messages
- Get practice in review and critique of written and oral presentations of peers to learn what are unclear presentation methods

Prerequisites: Stat 550

References:

- Boen, J.R. and Zahn, D.A. (1982). *The Human Side of Statistical Consulting*. Lifetime Learning Publications.
- Cabrera, J. and McDougall, A. (2002): *Statistical Consulting*. Springer.
- Chatfield, C.A. (1995). *Problem Solving: A Statistician's Guide*, 2nd edition. Chapman Hall.
- Cohen, A.R. and Bradford, D.L. (2005). *Influence Without Authority*, 2nd edition. Wiley.
- Derr, J. (2000). *Statistical Consulting: A Guide to Effective Communication*. Duxbury.
- Fisher, R., Ury, W. and Patton, B. (2011). *Getting to Yes: Negotiating Agreement Without Giving In*, revised edition. Penguin.
- Hand, D.J. and Everitt, B.S. (2007). *The Statistical Consultant in Action*. Cambridge Press.
- McGuire, P.J. and Putzell, S.M. (1988). *A Guide To Technical Writing*. Harcourt.
- Samuels, M.S. (1989). *The Technical Writing Process*. Oxford U Press.
- Strunk, W., White, E.B. and Angell, R. (1999). *The Elements of Style*, 4th edition. Pearson.

Notes:

1. This course is restricted to graduate students in the Department of Statistics.
2. Students seeking an exemption from Stat 551 based on previous equivalent coursework or consulting experience must do so at least one month prior to the start of the semester.
3. STAT 551 is graded on a Pass/Fail basis. To earn a Pass, the requirement is that all course work MUST be completed by the end of December 2019.
4. The skills developed in STAT 551 are essential for effective employment as an applied statistician. The skills required to interact effectively with non-statisticians in collaborating on research problems will be valuable no matter what career path you are contemplating.