

Week	Date	Methods	References
1	Sept 15	Review of Linear Regression	LM-2 Ch.2-4; LM-1 Ch.2-3; CD Ch.1; SM Ch.8.2.1, 8.3
2	Sept 22	Model comparison, diagnostics, collinearity, factors, model-checking	SM Ch.8.6, 8.7; LM-2 Ch.3, Ch.10, Ch.14-1,2; LM-1 Ch.4, Ch.13; CD Ch.6; SM Ch.8.5, 8.6
3	Sept 29	Model Selection, Types of Studies	LM-2 Ch.10; LM-1 Ch. 8; CD Ch.1,2; SM 8.7.1
4	Oct 6	Factor variables; random and mixed effects; principles of measurement	LM-2 Ch.14-17; LM-1 Ch.14-16 CD Ch.4; SM Ch.9.2.1
5	Oct 13	Designed experiments; preliminary analysis	LM-2 Ch.14,15; LM-1 Ch.13,14; CD Ch.5; SM Ch.9.1.2
6	Oct 20	Logistic Regression	ELM-1 Ch.2; SM 10.4.1
7	Oct 27	More on logistic regression; Intro to Generalized Linear Models	ELM-1 Ch.2,3, 6; SM 10.3
8	Nov 3	Generalized Linear Models	ELM-1 Ch.3.1,6,7; SM 10.6
9	Nov 10	Break	
10	Nov 17	Catch-up	
11	Nov 24	Nonparametric Regression	ELM-1 Ch. 11; CD Ch.8; SM 10.7.1,2
12	Dec 1	Nonparametric Regression	ELM-1 Ch. 11; CD Ch.8; SM 10.7.1,2
13	Dec 8	Recap	

Comments

This shows the main topics we'd like to cover, but is subject to adjustment as the course evolves. Electronic copies of the books listed below are available through the U of T Library, and have been posted to Quercus.

The books by Faraway are somewhat easier to read, so if you find Davison daunting go to those first and then come back to Davison after the lecture. The book by Cox & Donnelly is quite different as it sets out very general principles that are well worth reviewing as we go along.

In most weeks I will spend approximately 1 hour on the methods in the table above, 1 hour on selected case studies, and 1 hour on computing, discussion, and questions about the course and assignments.

References

SM: *Statistical Models* by A.C. Davison (Cambridge University Press)

CD: *Principles of Applied Statistics* by D.R. Cox and C.A. Donnelly

LM-1: *Linear Models with R* 1st edition by J.J. Faraway (Chapman & Hall)

LM-2: *Linear Models with R* 2nd edition by J.J. Faraway (Chapman & Hall)

ELM-1: *Extending the Linear Model with R* 1st edition by J.J. Faraway (Chapman & Hall)

ELM-2: *Extending the Linear Model with R* 2nd edition by J.J. Faraway (Chapman & Hall)