Week	Date	Methods	References
1	Jan 7	Likelihood inference: review of ML estimation; mis-specified models; computation; nonparametric mle	MS §§5.1–7, SM Ch 4
2	Jan 14	Bayesian estimation; Bayesian in- ference	$\begin{array}{llllllllllllllllllllllllllllllllllll$
3	Jan 21	Optimality in estimation	MS Ch 6; AoS Ch 12; SM §7.1, 11.5.2
4	Jan 28	Interval estimation; Confidence bands	MS §§7.1,2; AoS Ch 7; SM §7.1.4
5	Feb 4	Hypothesis testing; likelihood ratio tests	MS $\S$ 7.1–4 AoS Ch 10.6, SM
6	Feb 11	Significance testing	MS §7.5; AoS §10.2,6; SM Ch 4,
	Feb 18	Break	<i>§1.</i> <b>3.</b> 1
7	Feb $25$	Significance testing	SM 7.3.1
8	Mar 4	Goodness-of-fit testing	MS Ch 9; AoS §§10.3,4,5,8; SM p.327-8 (hard)
9	Mar 11	Multiple testing and FDR	AoS Ch 10.7, EH Ch 15.1,2
10	Mar 18	Intro to causal inference	AoS Ch 16, 17 SM Ch $9.1.2$
11	Mar 25	Aspects of analysis with missing data	SM 5.3,5 AoS Eg. 11.9
12	Apr 1	Loose Ends, Recap, and Project	

Presentations

## Subject to adjustment as the course progresses.

## References

MS: Mathematical Statistics by K. Knight (Chapman & Hall/CRC).

- AoS: All of Statistics by L. Wasserman (Springer) If your copy has a Chapter 1. Introduction, then all Chapter numbers increase by 1.
- SM: Statistical Models by A.C. Davison (Cambridge University Press)

EH: Computer Age Statistical Inference by B. Efron and T. Hastie (Cambridge University Press)