STA 2212S: Mathematical Statistics II Syllabus

Updated Mar3

Week	Date	Methods	References
1	Jan 13/15	Review of parametric inference	AoS Ch 9
2	Jan 20/22	Significance testingHypothesis test- ing	AoS Ch $10.1, 2, {\color{red}6}, 7;$ SM Ch $7.3.2, 4$
3	Jan 27/29	Significance testing	AoS Ch 10.2, 6; SM Ch 7.3.1, Ch 4
4	Feb $3/5$	Goodness of fit testing, Intro to multiple testing	AoS Ch 10.3,4,5,8; SM p.327-8 (hard)
5	Feb $10/12$	Multiple testing and FDR	AoS Ch 10.7, EH Ch 15.1,2
	Feb $17/19$	Break	
6	Feb $24/26$	Bayesian Inference	AoS Ch 11.1-4; SM Ch 11.1,2; EH
7	Mar $3/5$	Bayesian Inference	AoS Ch 11.5-9; SM Ch 11.4
8	Mar $10/12$	Empirical Bayes	EH Ch 6, SM Ch 11.5
9	${\rm Mar}\ 17/19$	Statistical decision theory	AoS Ch 12, SM Ch 11.5.2
10	Mar $24/26$	Multivariate Models	AoS Ch 14; SM Ch 6.3
11	Mar 31	Causal Inference and Graphical Models	AoS Ch 16, 17
12	Apr 7	Recap	

Comments

This shows the main topics we'd like to cover, but is subject to adjustment as the course evolves.

References

- 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)