

## DATASCI/STATS 531 schedule, Winter 2024

Thu Jan 11	Class 1. Chapter 1: introduction
Mon Jan 15	Homework 0, due 11:59pm, ungraded
Tue Jan 16	Class 2. Chapter 2. Trend and covariance
Thu Jan 18	Class 3. Chapter 3. White noise and basic time series models
Mon Jan 22	Homework 1 (needs first half of chapter 2), Participation 1, due 11:59pm
Tue Jan 23	Class 4. Chapter 4: ARMA models
Thu Jan 25	Class 5. Chapter 4 continued
Mon Jan 29	Homework 2 (needs chapter 3, 4). Participation 2, due 11:59pm
Tue Jan 30	Class 6. Chapter 5: parameter estimation
Thu Feb 01	Class 7. Chapter 5 continued
Tue Feb 06	Class 8. Chapter 6: seasonality and trend
Wed Feb 07	Homework 3 (needs chapter 5 and 6), Participation 3, due 11:59pm
Thu Feb 08	Class 9. Chapter 7: introduction to the frequency domain
Tue Feb 13	Class 10. Chapter 8: smoothing in the time and frequency domain
Thu Feb 15	Class 11. Chapter 8, continued
Mon Feb 19	Homework 4, Participation 4, due 11:59pm
Tue Feb 20	Class 12. Chapter 9: health economics example
Thu Feb 22	Class 13. Chapter 9 continued.
Fri Feb 23	Midterm project, due 11:59pm
Tue Feb 27	SPRING BREAK
Thu Feb 29	SPRING BREAK
Tue Mar 05	Class 14. Chapter 10: introduction to POMP models
Thu Mar 07	Class 15. Chapter 10 continued
Mon Mar 11	Midterm peer review, due 11:59pm
Tue Mar 12	Class 16. Chapter 11: POMP models for ecology and epidemiology
Thu Mar 14	Class 17. Chapter 12: simulation of stochastic models
Mon Mar 18	Homework 5 (needs chapter 10), Participation 5, due 11:59pm
Tue Mar 19	Class 18. Chapter 13: the particle filter
Thu Mar 21	Class 19. Chapter 13 continued
Mon Mar 25	Homework 6 (basic pomp installation and use, needs chapter 11), Participation 6, due 11:59pm
Tue Mar 26	Class 20. Chapter 14: iterated filtering
Thu Mar 28	Class 21. Chapter 14 continued
Mon Apr 01	Homework 7 (particle filter, needs chapter 13), Participation 7, due 11:59pm
Tue Apr 02	Class 22. Chapter 15: polio
Thu Apr 04	Class 23. Chapter 15 continued
Mon Apr 08	Homework 8 (iterated filtering, needs chapter 14), Participation 8, due 11:59pm
Tue Apr 09	Class 24. Chapter 16: stochastic volatility
Thu Apr 11	Class 25. Chapter 16 continued
Tue Apr 16	Class 26. Chapter 17: measles
Wed Apr 17	Homework 9 (group questions on POMP inference), Participation 9, due 11:59pm
Thu Apr 18	Class 27. Chapter 17 continued
Tue Apr 23	Class 28. Chapter 18: ebola
Tue Apr 23	Final project, due 11:59pm
Wed May 01	Final peer review, due 11:59pm