

## DATASCI/STATS 531 schedule, Winter 2024

Wed Jan 10	Class 1. Chapter 1. Introduction
Sun Jan 14	Homework 0, due 11:59pm, ungraded
Mon Jan 15	MLK
Wed Jan 17	Class 2. Chapter 2. Trend and covariance
Sun Jan 21	Homework 1 (needs first half of chapter 2), Participation 1, due 11:59pm
Mon Jan 22	Class 3. Chapter 3. White noise and basic time series models
Wed Jan 24	Class 4. Chapter 4. ARMA models
Mon Jan 29	Class 5. Chapter 4 continued
Tue Jan 30	Homework 2 (needs chapters 3 and 4). Participation 2, due 11:59pm
Wed Jan 31	Class 6. Chapter 5. Parameter estimation for ARMA
Mon Feb 05	Class 7. Chapter 5 continued
Wed Feb 07	Class 8. Chapter 6. Seasonality and trend
Sun Feb 11	Homework 3 (needs chapters 5 and 6), Participation 3, due 11:59pm
Mon Feb 12	Class 9. Chapter 7. Introduction to the frequency domain
Wed Feb 14	Class 10. Chapter 8. Smoothing in the time and frequency domain
Sun Feb 18	Homework 4 (needs chapter 7), Participation 4, due 11:59pm
Mon Feb 19	Class 11. Chapter 8, continued
Wed Feb 21	Class 12. Chapter 9. Health economics example
Fri Feb 23	Midterm project, due 11:59pm
Mon Feb 26	SPRING BREAK
Wed Feb 28	SPRING BREAK
Mon Mar 04	Class 13. Chapter 10: introduction to POMP models
Wed Mar 06	Class 14. Chapter 10 continued
Sun Mar 10	Midterm peer review, due 11:59pm
Mon Mar 11	Class 15. Chapter 11: POMP models for ecology and epidemiology
Wed Mar 13	Class 16. Chapter 12: simulation of stochastic models
Sun Mar 17	Homework 5 (needs chapter 10), Participation 5, due 11:59pm
Mon Mar 18	Class 17. Chapter 13: the particle filter
Wed Mar 20	Class 18. Chapter 13 continued
Sun Mar 24	Homework 6 (using pomp, needs chapter 11), Participation 6, due 11:59pm
Mon Mar 25	Class 19. Chapter 14: iterated filtering
Wed Mar 27	Class 20. Chapter 14 continued
Sun Mar 31	Homework 7 (particle filter, needs chapter 13), Participation 7, due 11:59pm
Mon Apr 01	Class 21. Chapter 15: polio
Wed Apr 03	Class 22. Chapter 15 continued
Fri Apr 12	Homework 8 (iterated filtering, needs chapter 14), Participation 8, due 11:59pm
Mon Apr 08	Class 23. Chapter 16: stochastic volatility
Wed Apr 10	Class 24. Chapter 16 continued
Mon Apr 15	Class 25. Chapter 17. Measles modeling and inference
Tue Apr 16	Homework 9 (group questions on POMP inference), Participation 9, due 11:59pm
Wed Apr 17	Class 26. Chapter 17 continued
Mon Apr 22	Class 27. Chapter 18. Ebola, forecasting and diagnostics
Tue Apr 23	Final project, due 11:59pm
Tue Apr 30	Final peer review, due 11:59pm