

## DATASCI/STATS 531/631 W26. Provisional schedule

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| Wed Jan 07 | Class 1. Chapter 1. Introduction  |
| Sun Jan 11 | Homework 0, due 11:59pm   |
| Mon Jan 12 | Class 2. Chapter 2. Trend and covariance  |
| Wed Jan 14 | Class 3. Chapter 3. White noise and basic time series models                          |
| Sun Jan 18 | Homework 1 (needs chapter 2), due 11:59pm   |
| Mon Jan 19 | MLK   |
| Wed Jan 21 | Class 4. Finish Chapter 3, start Chapter 4. ARMA models                               |
| Mon Jan 26 | Class 5. Chapter 4 continued. Start chapter 5.  |
| Tue Jan 27 | Homework 2 (needs chapter 3; chapter 4 to slide 15). Participation 1, due 11:59pm     |
| Wed Jan 28 | Class 6. Chapter 5. Parameter estimation for ARMA                                     |
| Mon Feb 02 | Class 7. Chapter 5 continued. Start Chapter 6   |
| Wed Feb 04 | Class 8. Chapter 6. Seasonality and trend. Start Chapter 7                            |
| Sun Feb 08 | Homework 3 (needs chapters 5 and 6), due 11:59pm                                      |
| Mon Feb 09 | Class 9. Chapter 7. Introduction to the frequency domain                              |
| Wed Feb 11 | Class 10. Chapter 8. Smoothing in the time and frequency domain                       |
| Sun Feb 15 | Homework 4 (needs chapter 7), Participation 2, due 11:59pm                            |
| Mon Feb 16 | Class 11. Quiz 1. Chapter 8, continued  |
| Wed Feb 18 | Class 12. Chapter 9. Health economics case study                                      |
| Fri Feb 20 | Midterm project, due 11:59pm  |
| Mon Feb 23 | Class 13. Chapter 10. Introduction to POMP models                                     |
| Wed Feb 25 | Class 14. Chapter 10 continued  |
| Fri Feb 27 | Midterm peer review, due 11:59pm  |
| Mon Mar 02 | SPRING BREAK  |
| Wed Mar 04 | SPRING BREAK  |
| Mon Mar 09 | Class 15. Chapter 11. POMP models for ecology and epidemiology                        |
| Wed Mar 11 | Class 16. Chapter 12. Simulation of stochastic models                                 |
| Sun Mar 15 | Homework 5 (needs chapter 10), due 11:59pm  |
| Mon Mar 16 | Class 17. Chapter 13. The particle filter   |
| Wed Mar 18 | Class 18. Chapter 13 continued  |
| Sun Mar 22 | Homework 6 (using pomp, needs chapter 11), Participation 3, due 11:59pm               |
| Mon Mar 23 | Class 19. Chapter 14. Parameter estimation by iterated filtering                      |
| Wed Mar 25 | Class 20. Chapter 14 continued  |
| Mon Mar 30 | Class 21. Chapter 15. Polio case study  |
| Tue Mar 31 | Homework 7 (iterated filtering, needs chapter 14), due 11:59pm                        |
| Wed Apr 01 | Class 22. Chapter 15 continued  |
| Mon Apr 06 | Class 23. Chapter 16. Stochastic volatility   |
| Wed Apr 08 | Class 24. Chapter 16 continued. Start of Chapter 17.                                  |
| Mon Apr 13 | Class 25. Chapter 17. Measles modeling and inference                                  |
| Tue Apr 14 | Homework 8 (POMP inference questions, needs chapter 15), Participation 4, due 11:59pm |
| Wed Apr 15 | Class 26. Quiz 2. Chapter 17 continued. Starting Chapter 18.                          |
| Mon Apr 20 | Class 27. Chapter 18. Ebola, forecasting and diagnostics                              |
| Tue Apr 21 | Final project, due 11:59pm  |
| Wed Apr 29 | Final peer review, due 11:59pm  |