# LLO 8200 Detailed Schedule (Subject to Change)



| Date | Module | Assignments Due (Due the day prior to week's session unless otherwise specified) | Suggested Readings |
|---|---|---|---|
| Week 0 | Optional R Bootcamp | | R Setup Slide Deck<br>.Rmd Bootcamp File<br>Bootcamp knit lecture notes<br><br>If you did not attend bootcamp, you should review the .Rmd file and the video recording and be sure everything runs smoothly. |
| Week 1<br>Jan 11-12 | Module 1. Welcome to Data Science: Tools of the Trade | | • Wickham:<br>  ○ Welcome: Introduction<br>  ○ Explore<br>  ▪ Introduction<br>  ▪ Workflow: basics<br>  ▪ Workflow: projects<br>• Silver, Chapter 1 |
| Week 2<br>Jan 18-19 | Module 2. Getting Data: Flat Files and "Tidy" Data | Post on the LMS wall some potential areas of interest for the group project.<br>○ The project will consist of analyzing data to build a predictive model for a particular phenomenon.<br>○ Groups will consist of 3-5 people (no more, no less).<br>○ I encourage making connections based on substantive interests rather than friendships, but as long as you have a group, I won't push you on this | • Wickham:<br>  ○ Wrangle<br>  ▪ Data import<br>  ▪ Tidy data<br>• Silver, Chapter 2<br>• Additional Resource: http://www.cookbook-r.com/Data_input_and_output/ |
| Week 3<br>Jan 25-26 | Module 3. Getting Data: Web Sources | • Group project – ***In-class*** discussion of the project (including norms surrounding communication and expectations) and group breakouts (we will use this time to finalize groups – if someone doesn't have a group at this point, we will find that person a group).<br><br>I expect that every group (if not at the max number of 5 people) will be open to additional group members if needed | • Silver, Chapter 3<br>• Additional Resource: http://www.cookbook-r.com/Data_input_and_output/ |

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| Week 4<br>Feb 1-2 | Module 4. Analyzing Data: Conditional Means (supplemental Ntiles code included in .Rmd but not in async videos) | • Problem Set 1 due (LMS Modules 1, 2, & 3) | • Wickham:<br>  ○ Explore: Data transformation<br>• Silver, Chapter 4 |
| Week 5<br>Feb 8-9 | Module 5. Presenting Data: Descriptive Plots | • Group project – Progress Report 1 due | • Wickham:<br>  ○ Explore<br>  ▪ Data visualization<br>  ▪ Data transformation<br>• Silver, Chapter 5<br>• Additional Resources:<br>  ○ http://www.cookbook-r.com/Graphs/Bar_and_line_graphs_(ggplot2)/<br>  ○ http://www.cookbook-r.com/Graphs/Plotting_distributions_(ggplot2)/ |
| Week 6<br>Feb 15-16 | Module 6. Analyzing Data: Linear Regression (we will split this unit across 1.5 weeks) | • Problem Set 2 due (LMS Modules 4 & 5) | • Wickham:<br>  ○ Model<br>  ▪ Introduction<br>  ▪ Model basics<br>  ▪ Model building<br>• Silver, Chapter 6<br>• Additional Resource: http://www.cookbook-r.com/Statistical_analysis/ |
| Week 7<br>Feb 22-23 | Module 6. Analyzing Data: Linear Regression (remainder) | | • Wickham:<br>  ○ Model<br>  ▪ Introduction<br>  ▪ Model basics<br>  ▪ Model building |

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| | Module 7. Presenting data: Scatterplots | | ○ Explore<br>▪ Data visualization<br>• Silver, Chapter 7<br>• Additional Resource: http://www.cookbook-r.com/Statistical_analysis/ |
| Week 8<br>March 1-2 | Module 8. Analyzing Data: Classification (part 1 – we are splitting this module across two weeks) | • Problem Set 3 due (LMS Modules 6 & 7)<br>• **Necessary Reading** - Article: Althoff, T., Danescu-Niculescu-Mizil, C., & Jurafsky, D. (2014). How to ask for a favor: A case study on the success of altruistic requests. In ICWSM. Available at: http://www.aaai.org/ocs/index.php/ICWSM/ICWSM14/paper/download/8106/8101 | • Wickham<br>○ Model<br>▪ Introduction<br>▪ Model basics<br>▪ Model building<br>• Silver, Chapter 8 |
| Week 9<br>March 8-9 | Module 8. Analyzing Data: Classification (remainder) | • Group project – Progress Report 2 due<br>• **Necessary Reading** – Same as previous | |
| Spring Break | | | |
| Week 10<br>March 22-23 | Group Work | • Final Project – in-class group work – we will be using breakout rooms to have group meetings this week. Come prepared to do group work and have a short check-in with Rafael. | • |
| Week 11<br>March 29-30 | Module 9. Presenting Data: Plots and Tables for Classification | • Problem Set 4 due (LMS Module 8) | • Silver, Chapter 11 |
| Week 12<br>April 5-6 | Module 10. Cross Validation | • Group project – Progress Report 3 due | • Wickham<br>○ Model<br>▪ Many Models<br>• Silver, Chapter 12 |

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| Week 13<br>April 12-13 | Group Project Presentations | | |
| Week 14<br>April 19-20 | Group Project Presentations | • Problem Set 5 due (LMS Modules 9 & 10) | |
| Week 15<br>May 1 | **FINAL PRESENTATIONS AND FINAL REPORTS DUE: Monday, May 1st by Midnight Pacific Time** | | |