

## 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		<a href="#">R Setup Slide Deck</a> <a href="#">.Rmd Bootcamp File</a> <a href="#">Bootcamp knit lecture notes</a>  If you did not attend bootcamp, you should review the .Rmd file and the video recording and be sure everything runs smoothly.
Week 1 Jan 11-12	Module 1. Welcome to Data Science: Tools of the Trade		<ul style="list-style-type: none"> <li>• Wickham:               <ul style="list-style-type: none"> <li>○ Welcome: Introduction</li> <li>○ Explore                   <ul style="list-style-type: none"> <li>▪ Introduction</li> <li>▪ Workflow: basics</li> <li>▪ Workflow: projects</li> </ul> </li> </ul> </li> <li>• Silver, Chapter 1</li> </ul>
Week 2 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. <ul style="list-style-type: none"> <li>○ The project will consist of analyzing data to build a predictive model for a particular phenomenon.</li> <li>○ Groups will consist of 3-5 people (no more, no less).</li> <li>○ 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</li> </ul>	<ul style="list-style-type: none"> <li>• Wickham:               <ul style="list-style-type: none"> <li>○ Wrangle                   <ul style="list-style-type: none"> <li>▪ Data import</li> <li>▪ Tidy data</li> </ul> </li> </ul> </li> <li>• Silver, Chapter 2</li> <li>• Additional Resource: <a href="http://www.cookbook-r.com/Data_input_and_output/">http://www.cookbook-r.com/Data_input_and_output/</a></li> </ul>
Week 3 Jan 25-26	Module 3. Getting Data: Web Sources	<ul style="list-style-type: none"> <li>• Group project – <i><b>In-class</b></i> 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).</li> </ul> <p>I expect that every group (if not at the max number of 5 people) will be open to additional group members if needed</p>	<ul style="list-style-type: none"> <li>• Silver, Chapter 3</li> <li>• Additional Resource: <a href="http://www.cookbook-r.com/Data_input_and_output/">http://www.cookbook-r.com/Data_input_and_output/</a></li> </ul>

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Week 4 Feb 1-2	Module 4. Analyzing Data: Conditional Means (supplemental Ntiles code included in .Rmd but not in async videos)	<ul style="list-style-type: none"> <li>Problem Set 1 due (LMS Modules 1, 2, &amp; 3)</li> </ul>	<ul style="list-style-type: none"> <li>Wickham:               <ul style="list-style-type: none"> <li>Explore: Data transformation</li> </ul> </li> <li>Silver, Chapter 4</li> </ul>
Week 5 Feb 8-9	Module 5. Presenting Data: Descriptive Plots	<ul style="list-style-type: none"> <li>Group project – Progress Report 1 due</li> </ul>	<ul style="list-style-type: none"> <li>Wickham:               <ul style="list-style-type: none"> <li>Explore                   <ul style="list-style-type: none"> <li>Data visualization</li> <li>Data transformation</li> </ul> </li> </ul> </li> <li>Silver, Chapter 5</li> <li>Additional Resources:               <ul style="list-style-type: none"> <li><a href="http://www.cookbook-r.com/Graphs/Bar_and_line_graphs_(ggplot2)/">http://www.cookbook-r.com/Graphs/Bar_and_line_graphs_(ggplot2)/</a></li> <li><a href="http://www.cookbook-r.com/Graphs/Plotting_distributions_(ggplot2)/">http://www.cookbook-r.com/Graphs/Plotting_distributions_(ggplot2)/</a></li> </ul> </li> </ul>
Week 6 Feb 15-16	Module 6. Analyzing Data: Linear Regression (we will split this unit across 1.5 weeks)	<ul style="list-style-type: none"> <li>Problem Set 2 due (LMS Modules 4 &amp; 5)</li> </ul>	<ul style="list-style-type: none"> <li>Wickham:               <ul style="list-style-type: none"> <li>Model                   <ul style="list-style-type: none"> <li>Introduction</li> <li>Model basics</li> <li>Model building</li> </ul> </li> </ul> </li> <li>Silver, Chapter 6</li> <li>Additional Resource: <a href="http://www.cookbook-r.com/Statistical_analysis/">http://www.cookbook-r.com/Statistical_analysis/</a></li> </ul>
Week 7 Feb 22-23	Module 6. Analyzing Data: Linear Regression (remainder)		<ul style="list-style-type: none"> <li>Wickham:               <ul style="list-style-type: none"> <li>Model                   <ul style="list-style-type: none"> <li>Introduction</li> <li>Model basics</li> <li>Model building</li> </ul> </li> </ul> </li> </ul>

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	Module 7. Presenting data: Scatterplots		<ul style="list-style-type: none"> <li>○ Explore <ul style="list-style-type: none"> <li>▪ Data visualization</li> </ul> </li> <li>• Silver, Chapter 7</li> <li>• Additional Resource: <a href="http://www.cookbook-r.com/Statistical_analysis/">http://www.cookbook-r.com/Statistical_analysis/</a></li> </ul>
Week 8 March 1-2	Module 8. Analyzing Data: Classification (part 1 – we are splitting this module across two weeks)	<ul style="list-style-type: none"> <li>• Problem Set 3 due (LMS Modules 6 &amp; 7)</li> <li>• <b>Necessary Reading</b> - Article: Althoff, T., Danescu-Niculescu-Mizil, C., &amp; Jurafsky, D. (2014). How to ask for a favor: A case study on the success of altruistic requests. In ICWSM. Available at: <a href="http://www.aaai.org/ocs/index.php/ICWSM/ICWSM14/paper/download/8106/8101">http://www.aaai.org/ocs/index.php/ICWSM/ICWSM14/paper/download/8106/8101</a></li> </ul>	<ul style="list-style-type: none"> <li>• Wickham <ul style="list-style-type: none"> <li>○ Model <ul style="list-style-type: none"> <li>▪ Introduction</li> <li>▪ Model basics</li> <li>▪ Model building</li> </ul> </li> </ul> </li> <li>• Silver, Chapter 8</li> </ul>
Week 9 March 8-9	Group Project Work	<ul style="list-style-type: none"> <li>• Group project – Progress Report 2 due</li> </ul>	
<b>Spring Break</b>			
Week 10 March 22-23	Book Discussion		Silver Book
Week 11 March 29-30	Group Work + Suggested Async Module 14.1-14.5	<ul style="list-style-type: none"> <li>• Problem Set 4 due (LMS Module 8)</li> <li>• 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.</li> </ul>	
Week 12 April 5-6	Module 10. Cross Validation (Look for details on course site)	<ul style="list-style-type: none"> <li>• Group project – Progress Report 3 due</li> </ul>	<ul style="list-style-type: none"> <li>• Wickham <ul style="list-style-type: none"> <li>○ Model <ul style="list-style-type: none"> <li>▪ Many Models</li> </ul> </li> </ul> </li> </ul>

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Week 13 April 12-13	Group Project Presentations		
Week 14 April 19-20	Group Project Presentations		
Week 15 May 1	<b>FINAL PRESENTATIONS AND FINAL REPORTS DUE: Monday, May 1st by Midnight Pacific Time</b>		