

**Deadlines (Quick Reference)**

- Problem Sets due 24 hours prior to following week's live session
- Final Project Deadlines
  - Progress Report 1 – October 11<sup>th</sup>, 2021 (5:30P Central Time)
  - Progress Report 2 – October 25<sup>th</sup>, 2021 (5:30P Central Time)
  - Progress Report 3 – November 8<sup>th</sup>, 2021 (5:30P Central Time)
  - Progress Report 4 – November 29<sup>th</sup>, 2021 (5:30P Central Time)
  - Final report - December 14<sup>th</sup>, 2021 (by midnight Central Time)

**Detailed Schedule (Subject to Change)**

Date	Module	Readings	Assignments Due	Additional Resources
Week 1 Aug 31, 2021	Welcome to Data Science: Tools of the Trade	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> Silver <ul style="list-style-type: none"> <li>• Chapter 1</li> </ul>		
Week 2 Sep 7, 2021	Analyzing Data: Conditional Means	Wickham <ul style="list-style-type: none"> <li>• Explore: Data transformation</li> </ul> Silver <ul style="list-style-type: none"> <li>• Chapter 2</li> </ul>	Problem Set 1 (Sep 6)	
Week 3 Sep 14, 2021	Presenting Data: Descriptive Plots	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> Silver <ul style="list-style-type: none"> <li>• Chapter 3</li> </ul>	Problem Set 2 (Sep 13)	<a href="#">ggplot2 - Bar and line graphs</a>  <a href="#">ggplot2 - Plotting distributions</a>

Week 4 Sep 21, 2021	Getting Data: Flat Files and "Tidy Data"	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> Silver <ul style="list-style-type: none"> <li>• Chapter 4</li> </ul>	Problem Set 3 (Sep 20)	
Week 5 & 6 Sep 28, 2021 Oct 5, 2021	Analyzing Data: Linear Regression	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> Silver <ul style="list-style-type: none"> <li>• Chapter 5</li> </ul>	Problem Set 4 (Sep 27)	
Week 7 Oct 12, 2021	Presenting Data: Scatterplots	Wickham <ul style="list-style-type: none"> <li>• Explore               <ul style="list-style-type: none"> <li>○ Data visualization</li> </ul> </li> <li>• Communicate               <ul style="list-style-type: none"> <li>○ Graphics for Communication</li> </ul> </li> </ul> Silver <ul style="list-style-type: none"> <li>• Chapter 6</li> </ul>	Problem Set 5 (Oct 11)  Final Project <ul style="list-style-type: none"> <li>• Progress Report 1 (Oct 11)</li> </ul>	
Week 8 Oct 19, 2021	Getting Data: Web Sources	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> Silver <ul style="list-style-type: none"> <li>• Chapter 7</li> </ul>	Problem Set 6 (Oct 18)	<u>Reed College rvest Introduction</u>
Week 9 & 10 Oct 26, 2021 Nov 2, 2021	Analyzing Data: Classification	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> Silver <ul style="list-style-type: none"> <li>• Chapter 8</li> </ul>	Problem Set 7 (Oct 25)  Final Project <ul style="list-style-type: none"> <li>• Progress Report 2 (Oct 25)</li> </ul>	<u>James, G., Witten, D., Hastie, T., &amp; Tibshirani, R. (2013). An introduction to statistical learning (Vol. 6). New York, NY: Springer. Chapter 4, Chapter 4 Lab R Code</u>

				<u>Althoff, T., Danescu-Niculescu-Mizil, C., &amp; Jurafsky, D. (2014, May). How to ask for a favor: A case study on the success of altruistic requests. In ICWSM.</u>
Week 11 Nov 9, 2021	Presenting Data: Plots and Tables for Classification	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> Silver <ul style="list-style-type: none"> <li>• Chapter 9</li> </ul>	Problem Set 8 (Nov 8)  Final Project <ul style="list-style-type: none"> <li>• Progress Report 3 (Nov 8)</li> </ul>	
Week 12 Nov 16, 2021	Cross Validation	Wickham <ul style="list-style-type: none"> <li>• Model <ul style="list-style-type: none"> <li>○ Many Models</li> </ul> </li> </ul> Silver <ul style="list-style-type: none"> <li>• Chapter 10</li> </ul>	Problem Set 9 (Nov 15)	
<b>Thanksgiving Break</b>				
Week 13 Nov 30, 2021	Cross Validation (Con.)	Wickham <ul style="list-style-type: none"> <li>• Model <ul style="list-style-type: none"> <li>○ Many Models</li> </ul> </li> </ul> Silver <ul style="list-style-type: none"> <li>• Chapter 10</li> </ul>	Final Project <ul style="list-style-type: none"> <li>• Progress Report 4 (Nov 29)</li> </ul>	
Week 14 Dec 7, 2021	Misc.	TBD	Problem Set 10 (Dec 6)	
Week 15 Dec 14, 2021			Final Project <ul style="list-style-type: none"> <li>• Final Product (Dec 14)</li> </ul>	