

Deadlines (Quick Reference)

- Problem Sets due 24 hours prior to following week's live session
- Final Project Deadlines
 - Progress Report 1 – October 11th, 2021 (5:30P Central Time)
 - Progress Report 2 – October 25th, 2021 (5:30P Central Time)
 - Progress Report 3 – November 8th, 2021 (5:30P Central Time)
 - Progress Report 4 – November 29th, 2021 (5:30P Central Time)
 - Final report - December 14th, 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"> • Welcome: Introduction • Explore <ul style="list-style-type: none"> ○ Introduction ○ Workflow: basics ○ Workflow: projects Silver <ul style="list-style-type: none"> • Chapter 1 		
Week 2 Sep 7, 2021	Analyzing Data: Conditional Means	Wickham <ul style="list-style-type: none"> • Explore: Data transformation Silver <ul style="list-style-type: none"> • Chapter 2 	Problem Set 1 (Sep 6)	
Week 3 Sep 14, 2021	Presenting Data: Descriptive Plots	Wickham <ul style="list-style-type: none"> • Explore <ul style="list-style-type: none"> ○ Data visualization ○ Data transformation Silver <ul style="list-style-type: none"> • Chapter 3 	Problem Set 2 (Sep 13)	ggplot2 - Bar and line graphs ggplot2 - Plotting distributions

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

				<u>Althoff, T., Danescu-Niculescu-Mizil, C., & Jurafsky, D. (2014, May). How to ask for a favor: A case study on the success of altruistic requests. In ICWSM.</u>
Week 9 Oct 26, 2021	Presenting Data: Plots and Tables for Classification	Wickham <ul style="list-style-type: none"> • Explore <ul style="list-style-type: none"> ○ Data visualization ○ Data transformation Silver <ul style="list-style-type: none"> • Chapter 9 	Problem Set 8 (Oct 25) Final Project <ul style="list-style-type: none"> • Progress Report 2 (Oct 25) 	
Week 10 Nov 2, 2021	Cross Validation	Wickham <ul style="list-style-type: none"> • Model <ul style="list-style-type: none"> ○ Many Models Silver <ul style="list-style-type: none"> • Chapter 10 	Problem Set 9 (Nov 1)	
Week 11 Nov 9, 2021	Getting Data: Databases	Wickham <ul style="list-style-type: none"> • TBD Silver <ul style="list-style-type: none"> • Chapter 11 	Problem Set 10 (Nov 8) Final Project <ul style="list-style-type: none"> • Progress Report 3 (Nov 8) 	
Week 12 Nov 16, 2021	Analyzing Data: Unsupervised Learning	Wickham <ul style="list-style-type: none"> • TBD Silver <ul style="list-style-type: none"> • Chapter 12 	Problem Set 11 (Nov 15)	
Week 13 Nov 30, 2021	Interactive Graphics	Wickham <ul style="list-style-type: none"> • TBD 	Problem Set 12 (Nov 29)	

		Silver <ul style="list-style-type: none"> • Chapters 13 	Final Project <ul style="list-style-type: none"> • Progress Report 4 (Nov 29) 	
Week 14 Dec 7, 2021	Communicating Results	Wickham <ul style="list-style-type: none"> • Silver • Conclusion 	Problem Set 13 (Dec 6)	
Week 15 Dec 14, 2021			Final Project <ul style="list-style-type: none"> • Final Product (Dec 14) 	