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
		• Welcome: Introduction
		• Explore
		   o Introduction
		   o Workflow: basics
		   o Workflow: projects
		Silver
		• Chapter 1		

Week 2 Sep 7, 2021	Analyzing Data: Conditional Means	Wickham • Explore: Data transformation Silver • Chapter 2	Problem Set 1 (Sep 6)	

Week 3
Sep 14, 2021
	Presenting Data: Descriptive Plots	Wickham
		• Explore
		   o Data visualization
		   o Data transformation
		
		Silver
		• 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
		• Wrangle
		   o Data import
		   o Tidy Data
		Silver
		• Chapter 4
			Problem Set 3
			(Sep 20)	

Week 5 & 6
Sep 28, 2021
Oct 5, 2021
	Analyzing Data: Linear Regression	Wickham
		• Model
		   o Introduction
		   o Model Basics
		   o Model Building
		Silver
		• Chapter 5
			Problem Set 4
			(Oct 4)	

Week 7
Oct 12, 2021
	Presenting Data: Scatterplots	Wickham
		• Explore
		   o Data visualization
		• Communicate
		   o Graphics for Communication
		Silver
		• Chapter 6
			Problem Set 5
			(Oct 11)
			
			Final Project
			• Progress Report 1 (Oct 11)	

Week 8
Oct 19, 2021
	Getting Data: Web Sources	Wickham
		• Explore
		   o Data visualization
		   o Data transformation
		Silver
		• Chapter 7
			Problem Set 6
			(Oct 18)
				<u>Reed College rvest Introduction</u>

Week 8
Oct 19, 2021
	Analyzing Data: Classification	Wickham
		• Explore
		   o Data visualization
		   o Data transformation
		Silver
		• Chapter 8
			Problem Set 7
			(Oct 18)
				<u>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.

Week 9 Oct 26, 2021	Presenting Data: Plots and Tables for Classification	Wickham
		 • Explore
		  ○ Data visualization
		  ○ Data transformation
		 Silver
		 • Chapter 9
			Problem Set 8 (Oct 25)
			
			 Final Project
			 • Progress Report 2 (Oct 25)	

Week 10 Nov 2, 2021	Cross Validation	Wickham • Model ○ Many Models Silver • Chapter 10	Problem Set 9 (Nov 1)	
Week 11 Nov 9, 2021	Getting Data: Databases	Wickham • TBD Silver • Chapter 11	Problem Set 10 (Nov 8) Final Project • Progress Report 3 (Nov 8)	
Week 12 Nov 16, 2021	Analyzing Data: Unsupervised Learning	Wickham • TBD Silver • Chapter 12	Problem Set 11 (Nov 15)	
Week 13 Nov 30, 2021	Interactive Graphics	Wickham • TBD	Problem Set 12 (Nov 29)	

		Silver • Chapters 13	Final Project • Progress Report 4 (Nov 29)	
Week 14 Dec 7, 2021	Communicating Results	Wickham • Silver • Conclusion	Problem Set 13 (Dec 6)	
Week 15 Dec 14, 2021			Final Project • Final Product (Dec 14)	