

Week	Videos/Notes			Assignments
0	Intro to class/syllabus (10 min)			<u>Uploads and posts are always due by 11:59pm EST</u>
5/19-5/28	R as an Environment for Data Science			
	5/19-5/21	Data Science Ideas	Data Science articles (Readings)	(Optional) Social Discussion Forum 1
			Creating a Blog with github (Reading)	First Blog post – due M 5/24
		R Basics	Intro to R & R Studio (22 min)	R Basics homework – due M 5/24
			Common Data Objects (16 min)	
			Accessing Data Objects (20 min)	
		R Markdown	Introduction to RMarkdown (16 min)	R Markdown homework – due W 5/26
			Syntax & Code Chunks (22 min)	Blog Update – due W 5/26
			Output Types (22 min)	
	5/24-5/28	Manipulating Data	Logicals (16 min)	Manipulating Data homework – due M 5/31
			Packages (6 min)	
			Basics of dplyr (14 min)	
			Creating New Variables (20 min)	
		Writing R Functions	Function Basics (20 min)	Writing Functions homework – due W 6/2
			Useful Function Information (12 min)	
			Digging Deeper (22 min)	
5/31-6/18	Data, Collaboration, & Efficiency			
	5/31-6/4	Data Sources	Basics & CSV Files (19 min)	(Optional) Social Discussion Forum 2
	Off M		Standard Data Types (15 min)	Second Blog post – due F 6/4
			Databases & SQL (21 min)	Data Sources homework part 1 – due M 6/7
			APIs (13 min)	Data Sources homework part 2 – due W 6/9
			JSON & XML Data (14 min)	
			Git, Github, & the CLI (Reading)	
			RStudio & Github Workflow (5 min)	
	6/7-6/11	Summarizing Data	Categorical Summaries (10 min)	Project 1 available Sat 6/5 – due Sun 6/20
			Categorical Data Graphs (23 min)	Summarizing Data homework– due M 6/14
			Quantitative Summaries (13 min)	
			Quantitative Data Graphs (32 min)	
	6/14-6/18	Improving R Programs	Loops (11 min)	Project 1 due Sun 6/20
	Off F		Vectorized Functions (22 min)	Improving R homework – due W 6/23
			Parallel Computing (32 min)	
			Automating R Markdown (15 min)	
6/21-7/9	Statistical/Machine Learning			
	6/21-6/25	Linear Regression Models	Simple Linear Regression (20 min)	Exam 1 F 6/25 – Sat 6/26
	(Drop date)		Multiple Linear Regression (21 min)	Regression homework – due W 6/30
	Off Th/F		Choosing Regression Models (12 min)	

			Candidate Model Selection (11 min)	
			Basic Logistic Regression (19 min)	
			Extending Logistic Regression (7 min)	
			Generalized Linear Models (14 min)	
			Basic Use of the caret Package (20 min)	
	6/28-7/2	Nonlinear Methods	K Nearest Neighbors (15 min)	(Optional) Social Discussion Forum 3
			Regression & Classification Trees (13 min)	Project 2 available Sat 6/26 – due Sun 7/11
			Fitting Regression Trees (11 min)	Reflection/feedback forum post – due M 6/28
			Fitting Classification Trees (11 min)	Nonlinear Methods homework – due M 7/5
		Ensemble Learning	Bagged Trees (16 min)	Ensemble Learning homework – due W 7/7
			Random Forests (4 min)	
			Boosted Trees (7 min)	
			Model Fitting Using the caret Package (12 min)	
	7/5-7/9	Unsupervised Learning	Principal Components (21 min)	Project 2 due Sun 7/11
	Off Th		Clustering (17 min)	
7/12-7/23	Scaling & Sharing Analyses			
	7/12-7/16	R shiny	Basics & User Interface (27 min)	Exam 2 W 7/14 – Th 7/15
			Server (38 min)	First App homework – due M 7/19
			Dynamic UI (27 min)	Dynamic UI homework due W 7/21
			Deploying, Debugging, & Useful Things (20 min)	
	7/19-7/23	Implementation	Creating an API (19 min)	(Optional) Social Discussion Forum 4
			Docker Containers (35 min)	Project 3 available Sat 7/17 – due M 8/2
			Dockerizing Shiny Apps (9 min)	Implementation homework due M 7/26
			Project Workflow and Production (Reading)	
			Data Science for Executives (33 min)	
7/26-7/30	Final Project Work Time			Reflection Blog post – due Th 7/29
8/2	Final Project due by 11:55pm			Project 3 due M 8/2