			Homeworks always due Tuesday at 1pm			
		Readings	**Lecture**	**Quiz**	**Where?**	**Lab**
Week 1						
T	25-Jan		Intro to the class, What is data, data structures		**ON ZOOM**	R and Rstudio refresher/ data structures
R	27-Jan	Broman and Woo (2017)	Collecting and recording data in a reproducible way, metadata		**ON ZOOM**	Making Data sheets for the field versus analysis
Week 2						
T	1-Feb	Lowndes et al. 2017 (Nature Eco Evo)	What is reproducible research and why is it important?		**ON ZOOM**	Tools for reproducible research (Github)
R	3-Feb	R4DS Ch4, Ch6	Reproducible scripts and workflow/importing data	1	**ON ZOOM**	Set up your file structure and make a script
Week 3						
T	8-Feb	Healy Ch 1, R4DS Ch 3	What makes a good visual?		**ON ZOOM**	Practice with ggplot
R	10-Feb	Wilke Ch 1-5	Visuals part 2		**ON ZOOM**	More ggplot
Week 4						
T	15-Feb	R4DS Ch 5, Ch 11	Data Wrangling part 1 (group_by, filter, select, summarise, mutate)		CS3220	Practice with dplyr
R	17-Feb	R4DS Ch 12	Data Wrangling part 2 (tidyr - pivots, separate, unite)	2	CS3220	Practice with tidyr
Week 5						
T	22-Feb	R4DS Ch 13	Relational data		**CR5427**	Practice different types of joins
R	24-Feb	R4DS Ch 16	Dates and times (lubridate)		**CR5427**	Practice with dates and times
Week 6						
T	1-Mar	R4DS 27,29	Intro to Rmarkdown		CS3220	Practice with Rmarkdown
R	3-Mar		Rmarkdown part II	3	CS3220	Practice with Rmarkdown
Week 7						
T	8-Mar	Wilke Ch 15, Healy Ch 7	Working with spatial data and making maps		CS3220	Make a map/ final project proposal due
R	10-Mar		Working with spatial data and making maps part II		CS3220	Good plot/Bad plot lab

Week 8						
T	15-Mar		Fun advanced plotting (gganimate, etc)		CS3220	Goodplot/Badplot presentations
R	17-Mar	R4DS 18,19	Functional programing	4	CS3220	Learn to write a function
T	22-Mar	No class - Spring Break				
R	24-Mar	No class - Spring Break				
Week 9						
T	29-Mar		Intro to group R package presentations		**ON ZOOM**	Work on group project (select and present a package)
R	31-Mar	Cesar Chavez Day No class				
Week 10						
T	5-Apr		How to ask for help (googling, stack overflow, and Reprex)		CS3220	Make a reprex
R	7-Apr	Mastering Shiny Ch1	Intro Shiny apps	5	CS3220	Shiny apps
Week 11						
T	12-Apr		Work on group project		CS3220	Work on group project
R	14-Apr		Present group projects		CS3220	Present group projects
Week 12						
T	19-Apr	R4DS Ch 14	Strings and regular expressions		CS3220	Working with words
R	21-Apr	R4DS Ch 15	Working with factors	6	CS3220	Practice with factors
Week 13						
T	26-Apr	R4DS Ch 21	Iterative data (for loops and map functions)		CS3220	Practice loops, etc
R	28-Apr		Models Part 1 (stats, lmer)		CS3220	simple lms and lmer
Week 14						
T	3-May		Models part 2 (many models with broom)		CS3220	practice with lots of models
R	5-May		Work on Final project	7	CS3220	Work on Final project
Week 15						
T	10-May		Final project presentations		CS3220	Final project presentations
R	12-May		Final project presentations		CS3220	Final project presentations