STA 210: Regression Analysis

Learn approaches for analyzing multivariate data sets, emphasizing analysis of variance, linear regression, and logistic regression. Learn techniques for checking the appropriateness of proposed models, such as residual analyses and case influence diagnostics, and techniques for selecting models. Gain experience dealing with the challenges that arise in practice through assignments that utilize real-world data. This class emphasizes data analysis over mathematical theory.

Portions of the course schedule and syllabus have been updated due to the transition to remote learning. Please see the Remote Learning Updates

(https://www2.stat.duke.edu/courses/Spring20/sta210.001/covid-

19-updates.html) and Schedule (https://www2.stat.duke.edu/courses/Spring20/sta210.001/schedule.html) for the most up-to-date information about the course.

Course info

Lectures

Labs

Teaching team and office hours

Instructor	Prof. Maria Tackett (http://stat.duke.edu/~mt324/)	✓ (mailto:maria.tackett@duke.edu)	Tue 8:30a - 10a, Thu 10:30a - 12p	Old Chem 118B
TAs	Youngsoo Baek (https://stat.duke.edu/people/youngsoo- baek-0)	✓ (mailto:youngsoo.baek@duke.edu)	Mon 1p - 3p	Old Chem 203B
	Cody Coombs (http://linkedin.com/in/cody- coombs-3b8034158)	✓ (mailto:cody.coombs@duke.edu) (https://github.com/coombscody)	Tue 1p - 3p	Old Chem 203B
	Sophie Dalldorf (https://www.linkedin.com/in/sophie- dalldorf-598a16192/)	✓ (mailto:sophia.dalldorf@duke.edu) (https://github.com/sophiedalldorf)	Fri 1p - 3p	Old Chem 203B
	Jonathan Klus (https://stat.duke.edu/people/jonathan- klus)	✓ (mailto:jonathan.klus@duke.edu) (↑ (https://github.com/jonklus)	Mon 3p - 5p	Old Chem 203B
	Matty Pahren (https://www.linkedin.com/in/mattypahren)	■ (mailto:martha.pahren@duke.edu) (https://github.com/mpahren)	Tue 3p - 5p	Old Chem 203B
	Ethan Shen (https://www.linkedin.com/in/ethan-shen- 931010134/)	✓ (mailto:ethan.shen@duke.edu) (https://github.com/ethann-shen)	Wed 3p - 5p	Old Chem 203B

Textbooks

Handbook of Regression Analsyis (http://sakai.duke.edu)	James, Witten, Hastie, Tibshirani	Springer, 1st edition, 2013
R for Data Science (http://r4ds.had.co.nz/)	Chatterjee, Simonoff	Wiley, 1st edition, 2013



GITHUB (HTTPS://GITHUB.COM/STA210-SP20) (./)



Remote Learning Updates

Latest update: 2020-03-20

- Resources to Transition to Remote Learning
- Lectures
- Labs
- · Office Hours
- Homework
- Late policy
- Exams
- Project
- Teamwork & Engagement
- Grading

This page is a summary of all the changes made to the syllabus due to the transition to the virtual classroom. *Anything stated on this page supersedes the corresponding statements in the original syllabus*.

Please note that this is a living document that is likely to change as we adjust to the changes. You can see the date at the top of this section to see when the document was last updated. I appreciate your patience as we navigate these circumstances together.

If you have any general questions about the remainder of the semester, please post them using the "remote-learning" tag on Piazza (https://piazza.com/class/k532nlvarim38u). If you have a question or comment you prefer to share privately, please email Professor Tackett.

Resources to Transition to Remote Learning

- Up-to-date information from the Duke Administration: https://keeplearning.duke.edu/ (https://keeplearning.duke.edu/)
- Learning Online Student Guide (https://arc.duke.edu/sites/arc.duke.edu/files/FINAL%20-%20Learning%20Online%20Student%20Guide.pdf) by the Academic Resource Center
- Study Connect (https://arc.duke.edu/study-connect) through the Academic Resource Center: Find a virtual study group!

Lectures

Lectures going through the course content will be pre-recorded and made available in the *Recorded Lectures & Discussions* tab in Sakai. You should watch the content videos **before** for our regularly scheduled meeting. See the "Class Prep" column in the course schedule

(https://www2.stat.duke.edu/courses/Spring20/sta210.001/schedule.html) for details about how to prepare for each live lecture session.

We will meet via Zoom during our regularly scheduled lecture time, MW 10:05a - 11:20a EDT. The link to join the Zoom meeting can be found at the *Zoom Class Meetings* tab on Sakai. During this time, we will review the key concepts from the pre-recorded lectures, answer any questions you have, and work in groups on practice problems.

I strongly encourage you to attend the live lecture sessions, if possible. This will help you keep a consistent schedule, keep up with the course content, and connect with your peers. I understand, however, that you may be in a timezone or have other circumstances that won't make this possible. All lecture sessions will be recorded and posted on Sakai. You can also post questions on pre-recorded videos in the *Recorded Lectures & Discussions* tab in Sakai, and I can will answer your questions during the scheduled lecture sessions.

Labs

Will meet via Zoom during the regularly scheduled lab times Th 3:05p - 4:20p or 4:40p - 5:55p EDT. You can find the link to the Zoom meeting in the *Zoom Class Meetings* tab on Sakai. Your TA will do a short introduction to lab, then you will work with your lab group in Breakout Rooms to complete the lab assignment for the day. Most of the lab assignments will be aimed at helping you complete the project.

The TAs will spend time with each group during the lab session, so I strongly encourage you attend the live lab sessions. I understand that you may be in a timezone or have other circumstances that won't make this possible, so I will provide some tips to help your group figure out a plan.

Lab sessions will <u>not</u> to be recorded.

Office Hours

Office hours will be held via Zoom. You can find the link to the office hours session in the *Zoom Class Meetings* tab in Sakai. The office hours schedule is below (in Eastern time (EDT)).

Professor Tackett	Tue 8:30a - 10a, Thu 10:30a - 12p
Youngsoo Baek	Mon 1p - 3p
Cody Coombs	Tue 1p - 3p
Sophie Dalldorf	TBD
Jonathan Klus	Mon 3p - 5p
Matty Pahren	Tue 3p - 5p
Ethan Shen	Wed 3p - 5p

When you get to office hours, you will be put in a "waiting room" until someone is available to help you. While in office hours, you may find it useful to utilize some of the features in Zoom, such as sharing your screen (https://support.zoom.us/hc/en-us/articles/201362153-How-Do-I-Share-My-

Screen-) or using the whiteboard (https://support.zoom.us/hc/en-us/articles/205677665-Sharing-a-whiteboard) while getting help with your questions.

We will also answer questions on Piazza during office hours. We will priortize helping students in the Zoom meeting room; however, we will answer questions in Piazza as time allows.

Note this schedule may be updated as we get more information about everyone's timezone.

Homework

There are no major changes to homework. There will be 3 more homework assignments, making 6 total homework assignments for the semester. I will drop the lowest homework grade at the end of the semester.

Late policy

The late policy has been updated to provide flexibility during this time, while also helping you stay on top of the course work.

Homework will be assigned on a Wednesday is due one week later on the following Wednesday at 11:59p EDT. You will have a 48-hour grace period, i.e. until Friday 11:59p EDT to turn in the homework with no late penalty. I recommend using the grace periods little as possible, but they are there to provide some stress relief.

After the 48-hour period, there is a 10% late penalty for each day the assignment is late.

Requests to waive late policy. If you have extenuating circumstances that prevent you from completing an assignment by the end of the grace period, you can request to have the late penalty waived by submitting the Late Policy Waiver Form

(https://duke.qualtrics.com/jfe/form/SV_3lUoyf1YJkvBcpv). Please fill the form out only if you truly have extenuating circumstances and need additional time beyond the grace period.

Exams

Exam 02 will be given online. It will be open-book, open-note, but you may **not** consult with other people. The exam will be made available **April 20 to April 22**, so you have some flexibility when you take it during that 2-day period. More details will be provided closer to the exam date.

The exam portion of your final course grade will be calculated as follows:

The higher grade of Exam 01 & Exam 02 will be worth 25% of the final course. The lower of the two grades will be worth 15% of the final course grade.

Project

The primary objective of the project is to give you the opportunity to apply what you've learned in the class to a real-world analysis.

During the week of March 23, I will be soliciting feedback from each group and at the individual level to get your thoughts on the best option to still achieve the objectives of the project while taking into account our new learning evironment.

Teamwork & Engagement

Given the change in the semester, the Teamwork & Engagement portion of the grade will be based only on the in-class questions from January 22 - March 5. You will receive full credit for this portion of the grade if you completed at least 60% of the in-class exercises.

Grading

The final grade will be calculated as follows

Homework	25%
Labs	15%
Max{Exam 01, Exam 02}	25%
Min{Exam 01, Exam 02}	15%
Final Project	15%
Teamwork & Engagement	5%

By default, you are registered as S/U grading for this course (see "How Will I Be Graded" under the "Academic Continuity" section on https://keeplearning.duke.edu/ (https://keeplearning.duke.edu/) for a brief summary of this updated grading policy). If you wish to receive a letter grade for this course, you will need to submit the S/U to Graded Form (https://registrar.duke.edu/forms/sugraded) on the Registrar's website.

The final letter grades will be assigned as follows:

A	≥ 93
A-	90 - 92.22
B+	87 - 89.99
В	83 - 86.99
В-	80 - 82.99
C+	77 - 79.99
С	73 - 76.99
C-	70 - 72.99

D+	67 - 69.99
D	63 - 66.99
D-	60 - 62.99
F	< 60

Click here (https://www2.stat.duke.edu/courses/Spring20/sta210.001/index.html) to get back to the STA 210 homepage.

Syllabus

Portions of the course schedule and syllabus have been updated due to the transition to remote learning. Please see the Remote Learning Updates

(https://www2.stat.duke.edu/courses/Spring20/sta210.001/covid-19-updates.html) and Schedule (https://www2.stat.duke.edu/courses/Spring20/sta210.001/schedule.html) for the most up-to-date information about the course.

Click here (syllabus.pdf) to download a PDF copy of the syllabus.

Course Learning Objectives

By the end of the semester, you will...

- know methods for analyzing multivariate datasets, with an emphasis on interpretation
- know how to check whether proposed statistical models are appropriate for given data
- develop proficiency in addressing complex research questions using statistical evidence
- develop proficiency in computing tools used to conduct reproducible statistical analyses, specifically R and Git
- understand the process of data-based research by working on an independent research project

Activities & Assessments

The following activities and assessments will help you successfully achieve the course learning objectives. By experiencing the course content in different ways, you will not only gain a better understanding of regression analysis, but you will also get experiences that can guide you as you apply what you've learned in future academic and professional projects.

Homework (25%)

In homework, you will apply what you've learned during lecture and lab to complete data analysis tasks. You may discuss homework assignments with other students; however, homework should be completed and submitted individually. Homework must be typed up using R Markdown and submitted in the appropriate GitHub repository.

Individual homework extensions will only be given for extenuating circumstances. There must be notification from your academic dean about the need for an extension before the homework deadline. We do not grant extensions after the assignment is due.

To accommodate unexpected and temporary situations (e.g. interviews and other travel, unusually busy weeks, short term illness, etc.), the lowest homework grade will be dropped at the end of the semester.

Labs (15%)

In labs, you will apply the concepts discussed in lecture to various data analysis scenarios, with a focus on the computation. You will work on lab assignments in teams, and all team members are expected to contribute equally to the completion of each assignment. You are expected to use the team's repository on the course's GitHub page as the central platform for collaboration. Commits to this repository will be used as a metric of each team member's relative contribution for each lab. You will also be asked to evaluate your team members' performance periodically during the semester.

A portion of each lab grade will be for attending and participating during the lab session. You must attend lab and participate during the lab session to receive credit for the group's lab assignment. If you did not attend lab or did not participate during the lab session, your name should not be included in the final group submission.

If you miss lab, you should complete lab for partial credit by the regular lab deadline.

Individual lab extensions will only be given for extenuating circumstances. There must be notification from your academic dean about the need for an extension before the lab deadline. We do not grant extensions after the assignment is due.

To accommodate unexpected and temporary situations (e.g. interviews and other travel, unusually busy weeks, short term illness, etc.), the lowest lab grade will be dropped at the end of the semester.

Exams (Exam 01: 20%, Exam 02: 20%)

The exams are an opportunity to assess the knowledge and skills you've learned. They will include both the conceptual and mathematical and conceptual aspects of regression. Both exams will be given during a lecture class period, and you will be permitted to bring one page of hand-written notes to each exam. The exam dates are as follows:

- Exam 01: Wednesday, February 26
- Exam 02: Wednesday, April 15

Exam dates cannot be changed and no make-up exams will be given. If you must miss an exam, your absence must be officially excused before the exam due date. If your absence is excused, the missing exam grade will be imputed at the end of the semester based on your performance on other relevant individual coursework.

Final Project (15%)

The purpose of the project is to apply what you've learned throughout the semester to analyze an interesting data-based research question using regression. The project will be completed in teams, and each team will present their results during the final exam period, Tuesday, April 28, 9a - 12p. **Project presentations must be done during the**

specified period.

Teamwork & Engagement (5%)

This part of the final grade will consist of three components.

- Team Feedback Surveys. You will be assigned to diverse teams of 3-4 students based on the results of a Get to Know You survey at the beginning of the semester. These teams will stay consistent throughout the semester (barring extraordinary circumstances). You will primarily work in these teams on lab assignments, the final project, and some in-class activities.
- Daily Engagement Surveys. After each class you will receive a quick survey of consisting of three questions about engagement in the day's lecture. You are expected to fill out the survey even if you did not attend lecture that day. You are required to complete at least 80% of the daily engagement surveys along with the pre-course and post-course surveys to receive full credit for this component of the grade.
- In-Class Questions. We will use active learning in class, which will include answering questions through a web browser. You are required to complete at least 75% of these in-class questions to receive full credit for this component of the grade. You will not be graded based on accuracy; however, you should make a earnest attempt at answering the questions, since they will be used in part to give real-time feedback about the class's understanding of the lecture material. You will be identified using your Net Id. It is your responsibility to ensure your Net Id is entered correctly on each survey to receive credit. In-class questions cannot be made up; there is built-in flexibility so you can earn full credit even if you miss multiple lectures.

Grade Calculation

The final grade will be calculated as follows:

Homework	25%
Labs	15%
Exam 01	20%
Exam 02	20%
Final Project	15%
Teamwork & Engagement	5%

Class attendance in lecture and lab is a firm expectation; frequent absences or tardiness will be considered a legitimate cause for grade reduction.

If you have a cumulative numerical average of 90 - 100, you are guaranteed at least an A-, 80 - 89 at least a B-, and 70 - 79 at least a C-. The exact ranges for letter grades will be determined at the end of the semester.

Diversity & Inclusion

It is my intent that students from all diverse backgrounds and perspectives be well-served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that the students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity and in alignment with Duke's Commitment to Diversity and Inclusion (https://provost.duke.edu/initiatives/commitment-to-diversity-and-inclusion). Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally, or for other students or student groups.

Furthermore, I would like to create a learning environment for my students that supports a diversity of thoughts, perspectives and experiences, and honors your identities. To help accomplish this:

- If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. If you prefer to speak with someone outside of the course, your academic dean is an excellent resource.
- I (like many people) am still in the process of learning about diverse perspectives and identities. If something was said in class (by anyone) that made you feel uncomfortable, please talk to me about it.

Accessibility

Duke University is committed to providing equal access to students with documented disabilities. Students with disabilities may contact the Student Disability Access Office (SDAO) (https://access.duke.edu) to ensure your access to this course and to the program. There you can engage in a confidential conversation about the process for requesting reasonable accommodations both in the classroom and in clinical settings. Students are encouraged to register with the SDAO as soon as they begin the program. Please note that accommodations are not provided retroactively. More information can be found online at access.duke.edu (https://access.duke.edu) or by contacting SDAO at 919-668-1267, SDAO@duke.edu (mailto:sdao@duke.edu).

This class will use the Testing Center to provide testing accommodations to students registered with and approved by the SDAO. The center operates by appointment only and appointments must be made at least 7 consecutive days in advance, but please schedule your appointments as far in advance as possible. You will not be able to make an appointment until you have submitted a Semester Request with the SDAO and it has been approved. For instructions on how to register with SDAO, visit their website at https://access.duke.edu/requests (https://access.duke.edu/requests). For instructions on how to make an appointment at the Testing Center, visit their website at https://testingcenter.duke.edu (https://testingcenter.duke.edu).

Getting Help

- If you have a question during lecture or lab, feel free to ask it! There are likely other students with the same question, so by asking you will create a learning opportunity for everyone.
- The teaching team is here to help you be successful in the course. You are encouraged to attend office hours during the times posted on the home page to ask questions about the course content and assignments. A lot of questions are most effectively answered in-person, so office hours are a valuable resource. Please use them!
- Outside of class and office hours, any general questions about course content or assignments should be posted on Piazza. There is a chance another student has already asked a similar question, so please check the other posts on Piazza before adding a new question. If you know the answer to a question posted on Piazza, I encourage you to respond!

There are times may need help with the class that is beyond what can be provided by the teaching team. In those instances, I encourage you to visit the Academic Resource Center. The Academic Resource Center (ARC) (https://arc.duke.edu) offers free services to all students during their undergraduate careers at Duke. Services include Learning Consultations, Peer Tutoring and Study Groups, ADHD/LD Coaching, Outreach Workshops, and more. Because learning is a process unique to every individual, they work with each student to discover and develop their own academic strategy for success at Duke. Contact the ARC to schedule an appointment. Undergraduates in any year, studying any discipline can benefit! Contact ARC@duke.edu (mailto:arc@duke.edu), 919-684-5917, 211 Academic Advising Center Building, East Campus – behind Marketplace.

Course Materials

All lecture notes, assignment instructions, up-to-date schedule, and other course materials may be found on the course website, http://bit.ly/sta210-sp20 (http://bit.ly/sta210-sp20). I will periodically send announcements via email, so please check your email regularly. You may also find a copy of announcements on Sakai.

Late Work

Homework or lab assignments submitted late but within 24 hours of the deadline may be accepted with a 20% penalty. Homework or lab assignments submitted any later will <u>not</u> be accepted.

Late work will not be accepted for the exams or the final project.

Academic Honesty

By enrolling in this course, you have agreed to abide by and uphold the provisions of the Duke Community Standard (https://studentaffairs.duke.edu/conduct/about-us/duke-community-standard) as well as the policies specific to this course. Any violations will automatically result in a grade of 0 on the assignment and will be reported to Office of Student Conduct (https://studentaffairs.duke.edu/conduct) for further action.

- You may not discuss or otherwise work with others on the exams. Unauthorized collaboration or using
 unauthorized materials will be considered a violation for all students involved. More details will be given closer
 to the exam date.
- **Reusing code**: Unless explicitly stated otherwise, you may make use of online resources (e.g. StackOverflow) for coding examples on assignments. If you directly use code from an outside source (or use it as inspiration), you must explicitly cite where you obtained the code. Any recycled code that is discovered and is not explicitly cited will be treated as plagiarism.
- On individual assignments, you may not directly share code or write up with other students. On team assignments, you may not directly share code or write up with another team. Unauthorized sharing of the code or write up will be considered a violation for all students involved.

Regrade Requests

Regrade requests should be submitted through the regrade request from on Gradescope. **Requests for a regrade** must be made within a week of when the assignment is returned; requests submitted later will not be considered.

You should only submit a regrade request if there is an error in the grade calculation or a correct answer was mistakenly marked as incorrect. You should not submit a regrade to dispute the number of points deducted for an incorrect response. Please note that by submitting a regrade request, your entire assignment may be regraded and you may potentially lose points.

Due to the time consuming nature of responding to regrade requests, you should attend office hours and ask a member of the teaching team about the feedback before submitting the request When you submit a request, please indicate which member of the teaching team you spoke with. *Note: Grades can only be changed by the Professor Tackett. Teaching Assistants cannot change grades on returned assignments.*

No grades will be changed after the final project presentations.

Technology

Cell phones and other electronic devices should be turned off or put on silent during class. When you use a laptop, tablet, or comparable device, please ensure that the volume set to mute and the device is only used for class purposes. In general, you should focus on the class discussion/activity at hand and refrain from engaging in other work or outside activities.

DUKE STATSCI (HTTP://STAT.DUKE.EDU/)

RSTUDIO (HTTPS://VM-MANAGE.OIT.DUKE.EDU/CONTAINERS)

GITHUB (HTTPS://GITHUB.COM/STA210-SP20) (./)



The schedule has been updated to accommodate the transition to remote learning. For each date, the topic lists what will be discussed during the live lecture or lab session. The items under "Class Prep" are intended to be completed before that day's lectures session. The items under "Live Lectures" will be the content covered during the live lecture sessions.

Date	Lesson	Live Lectures	Class Prep	Lab	HW	Misc	Project
	Week 01	<u> </u>		₽.	Ø	•	P
Wed, Jan 8	Welcome to Regression Analysis	(./slides/lec-slides/00-intro.html)			Ø	(./misc/jan8.html)	Þ
Thu, Jan 9	No Lab	므	5 4	&	ď	•	P
	Week 02	<u> </u>		₽	Ø	•	Ď
Mon, Jan 13	Review: Confidence Intervals	(./slides/lec-slides/01-review-ci.html)	(./reading/reading- 01.html)	&	Ø	•	P
Wed, Jan 15	Review: Hypothesis Tests	(./slides/lec-slides/02-review-ht.html)	(./reading/reading- 01.html)	Ð	Ø	•	P
Thu, Jan 16	Lab 01: Review R	(./slides/lab-slides/01-lab-slides.html)		(./labs/lab-01-review-r.html)	Ø	•	P
UNIT 01	CONTINUOUS RESPONSE VARIABLES	旦		B	Ø	•	P
	Week 03	显		Ø	Ø	•	È

Mon, Jan 20	NO CLASS - Martin Luther King, Jr. Day	므	B4		ď	•	Þ
Wed, Jan 22	Simple Linear Regression: Basics	(./slides/lec-slides/03-slr.html)	(./reading/reading- 02.html)	Ð	(./hw/hw- 01.html)	•	P
Thu, Jan 23	Lab 02: Simple Linear Regression	(./slides/lab-slides/02-lab-slides.html)		্রি (./labs/lab-02- slr.html)	ď	•	Þ
	Week 04	旦		Ø	Ø	•	Ď
Mon, Jan 27	Simple Linear Regression: Inference	(./slides/lec-slides/04-slr-inf.html)	(./reading/reading- 02.html)	&	ď	•	Þ
Wed, Jan 29	No Lecture: Watch rstudio::conf	므	B4	6	(./hw/rstudio- conf.html)	•	Þ
Thu, Jan 30	Lab 03: Inference for Simple Linear Regression	(./slides/lab-slides/03-lab-slides.html)		(./labs/lab-03- slr-inf.html)	ď	•	B
	Week 05	므		Ø	ď	•	ß
Mon, Feb 3	Analysis of Variance	(./slides/lec-slides/05-anova.html)	(./reading/reading- 03.html)	Ð	ď	•	Þ
Wed, Feb 5	Multiple Linear Regression: The Basics	(./slides/lec-slides/06-mlr.html)	(./reading/reading- 04.html)	₽	(./hw/hw- 02.html)	•	è
Thu, Feb 6	Lab 04: ANOVA	(./slides/lab-slides/04-lab-slides.html)		ঝি (./labs/lab-04- anova.html)	ď	•	Þ
	Week 06	므		\$		•	P
Mon, Feb 10	MLR: Prediction & math details	(./slides/lec-slides/07-mlr-special-predictors.html)	(./reading/reading- 05.html)	₽.	ď	•	Ď
Wed, Feb 12	MLR: Special predictors & assumptions	(./slides/lec-slides/08-assumptions.html)	(./reading/reading- 05.html)	Ð	ď	•	Ď
Thu, Feb 13	Lab 05: Data wrangling & regression	(./slides/lab-slides/05-lab-slides.html)		্রি (./labs/lab-05- mlr.html)	ď	•	Ď
	Week 07	므		•	Ø	•	ß
Mon, Feb 17	MLR: Interactions & Transformations	(./slides/lec-slides/09-transformations.html)	(./reading/reading- 06.html)	₽.	(./hw/hw- 03.html)	(./misc/feb17.html)	P
Wed, Feb 19	Spatial Regression	(./slides/lec-slides/spatial_regression.pdf)		Ð	ď	•	P
	Moran's I Code	(./slides/lec-slides/morans_i.pdf)		ð	Ø	•	Ď

Thu, Feb 20 Mon, Feb	Lab 06: Spatial Regression	묘	B (₽	Ø	•	P
	Week 08	므		Ф	Ø	•	P
24	Exam 01 Review	(/slides/lec-slides/10-exam-01-review.html)		4	ď	•	B
Wed, Feb 26	Exam 01	므		4	ď	•	B
Thu, Feb 27	Lab: STA 210 Project	(./slides/lab-slides/project-feb27.html)		4	Ø	•	(./project/project.html)
	Week 09	므		Ф	Ø	•	P
Mon, Mar 2	MLR: Model Assessment & Selection	(/slides/lec-slides/11-model-assessment.html)	(./reading/reading- 07.html)	4	ď	•	В
Wed, Mar 4	MLR: Model Selection & Diagnostics	(./slides/lec-slides/12-model-selection.html)	(./reading/reading- 07.html)	6	ď	•	B
Thu, Mar 5	Lab 07: Model Selection & Diagnostics	(/slides/lab-slides/07-lab-slides.html)		(./labs/lab-07- selection- diagnostics.html)	ď	•	(./project/project.html)
	Week 10	<u>_</u>		\$	Ø	•	P
Mon, Mar 9	NO CLASS - Spring Break	므		6	ď	•	Ď
Wed, Mar 11	NO CLASS - Spring Break	므		.	Ø	•	ß
Thu, Mar 12	NO LAB - Spring Break	므		₫	Ø	•	Þ
	CATEGORICAL RESPONSE VARIABLES	므		₫.	Ø	•	Þ
	Week 11	므		4)	Ø	•	P
Mon, Mar 16	Spring Break, Pt	므	B 4	4	ď	•	ß
Wed, Mar 18		므		3	Ø	•	Þ
Thu, Mar 19		므		\$	Ø	•	Þ
	Week 12	므		4	Ø	•	P
Mon, Mar 23		므		Ø	ď	•	Ď

Wed, Mar 25	Logistic regression	므		\$	ď	•	P
Thu, Mar 26	Lab	므		\$	ď	•	(./project/project.html)
	Week 13	므		S	Ø	•	B
Mon, Mar 30	Logistic regression	므		\$	Ø	•	P
	Lab 07 due	묘		(./labs/lab-07- selection- diagnostics.html)	ď	•	P
Wed, Apr 1	Logistic regression	므		\$	(./hw/hw- 04.html)	•	P
Thu, Apr 2	Lab	므		\$	Ø.	•	È
	Week 14	<u> </u>		€.	ď	•	B
Mon, Apr 6	Mulitinomial logistic regression	므		\$	ď	•	Þ
Wed, Apr 8	Mulitinomial logistic regression	므		Ø	(./hw/hw- 05.html)	•	Ď
Thu, Apr 9	Lab	므		\$	ď	•	(./project/project.html)
	Week 15	<u> </u>		₽.	Ø	•	Þ
Apr	Multinomial logistic regression	므		\$	Ø	•	È
Wed, Apr 15	Missing data	므		\$	(./hw/hw- 06.html)	•	Þ
Thu, Apr 16	Lab	므		\$	Ø.	•	È
	Week 16	<u> </u>		€.	ď	•	Þ
Mon, Apr 20	TBD	므		(\$)	ď	•	P
Wed, Apr 22	TBD	묘	B4	•	ď	•	(./project/project.html)
	Final Exam Period	므		Ð	ď	•	P

Tue, Apr 28 -	Project Presentations	<u> </u>	H	4	Ø	•	(./project/project.html)
Thu, Apr							
30							
Q DUK	E STATSCI (HTTP://STAT.DUKE.EDU/)	RSTUDIO (HTTPS://VM	/I-MANAGE.OIT.DUKE.I	EDU/CONTAINERS)	O GI	THUB (HTTPS://GITHU	B.COM/STA210-SP20)
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