

# Making remote lectures active and inclusive in a large undergraduate course

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Teaching and Learning Statistics Online  
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 [bit.ly/active-remote-lecture](https://bit.ly/active-remote-lecture)

# Background

# Duke

Located in Durham, North Carolina

~ 6500 undergrads, ~ 9100 grads



90 students in Spring 2020

2 lectures + lab each week

# Lecture format

Lecture  
content videos

asynchronous

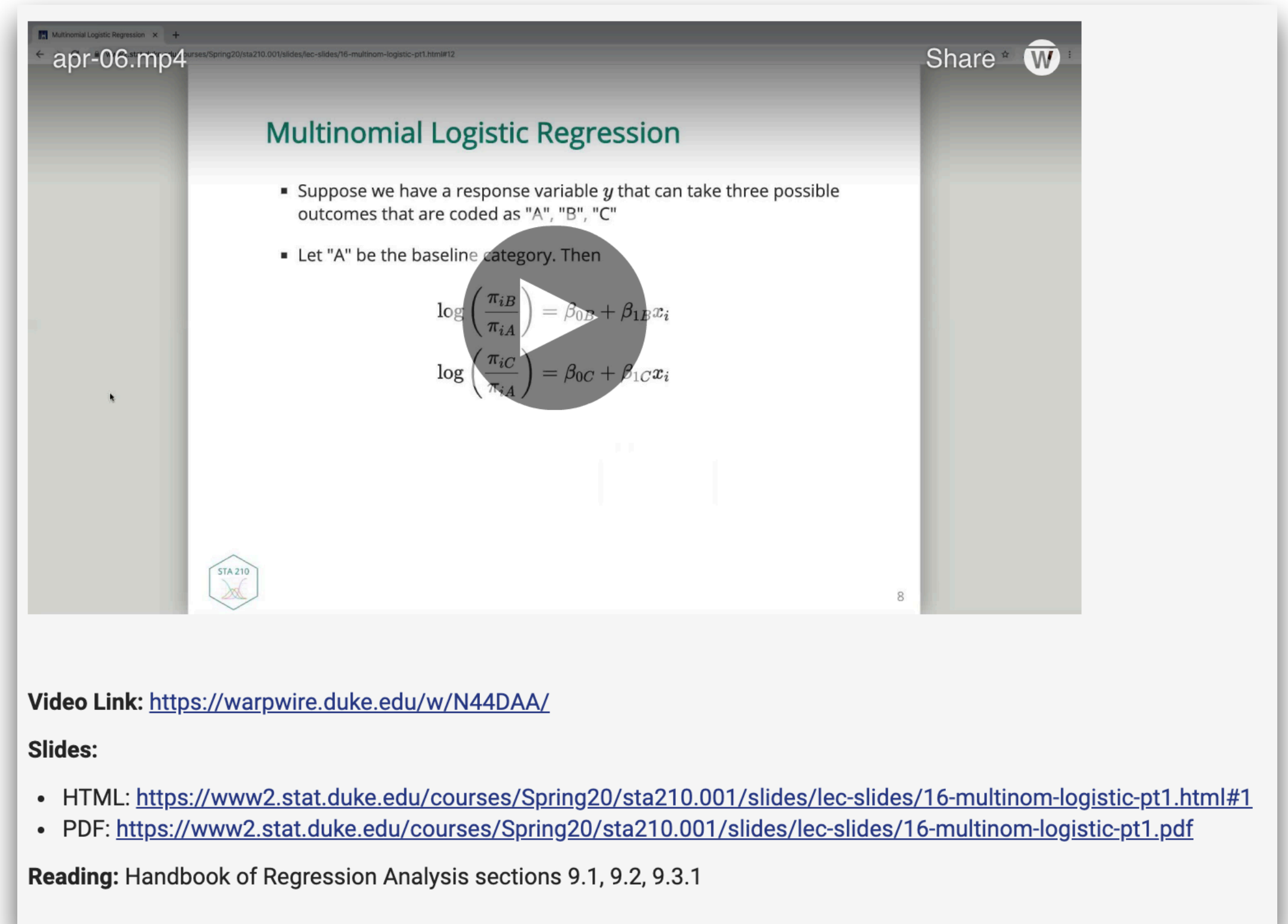
+

Live lecture  
sessions

synchronous

# Lecture content videos

- “Video textbook”
- Slides and discussion questions
- Posted in discussion thread in learning management system (LMS)
- Students post questions in discussion thread



The screenshot shows a video player interface. The video title is 'april-06.mp4'. The slide content is titled 'Multinomial Logistic Regression' and includes the following text:

- Suppose we have a response variable  $y$  that can take three possible outcomes that are coded as "A", "B", "C"
- Let "A" be the baseline category. Then

$$\log \left( \frac{\pi_{iB}}{\pi_{iA}} \right) = \beta_{0B} + \beta_{1B}x_i$$
$$\log \left( \frac{\pi_{iC}}{\pi_{iA}} \right) = \beta_{0C} + \beta_{1C}x_i$$

The slide also features a pie chart with three segments. The bottom left corner of the slide has a logo for 'STA 210' and the number '8' in the bottom right corner.

**Video Link:** <https://warppwire.duke.edu/w/N44DAA/>

**Slides:**

- HTML: <https://www2.stat.duke.edu/courses/Spring20/sta210.001/slides/lec-slides/16-multinom-logistic-pt1.html#1>
- PDF: <https://www2.stat.duke.edu/courses/Spring20/sta210.001/slides/lec-slides/16-multinom-logistic-pt1.pdf>

**Reading:** Handbook of Regression Analysis sections 9.1, 9.2, 9.3.1

# Live lecture sessions

Welcome to STA 210!!

open the multinomial logistic analysis  
Rmd or HTML file.

If you have any questions, post them in the chat

- Focused on application
- Answer questions from lecture content videos
- Interactive sessions
- Recordings posted in LMS

**“Efficient content delivery  
and community”**

- Undergraduate student

**“Efficient + effective content  
delivery and inclusive  
community”**

- Undergraduate student + Maria



# What worked in the spring

## Small group activities

- Breakout rooms
- Collaborative documents

## Using technology to encourage participation

- Polls
- Chat
- Reactions

## Short break during live lecture session



# What I'm trying in the fall

- 💡 Casual small group discussion at beginning of live lecture session
- 💡 Encourage but not require students to use video
- 💡 Assign someone to manage chat and questions

# Making online lectures more inclusive

## Understand students' learning environments

- Time zone
- Primary device (laptop, tablet, mobile phone, etc.)
- Access to quiet study space
- Other concerns (optional)

## Make videos easy to view

- ~ 10 minutes
- Content readable on multiple devices
- Add captions

# Making online lectures more inclusive

- ✓ Reduce barriers to participation
  - Offer multiple ways to participate synchronously and asynchronously
  - Practice video conferencing features with the class
  - Record and post sessions
- ✓ Get feedback from students

# Resources for remote lectures

- Teaching online on short notice by Greg Wilson
- Flex Teaching: A Guide to Course Delivery by Duke Learning Innovation
- Tips for live teaching tech online, deeply informed by the Carpentries by Elizabeth Wickes
- 6 tips for creating engaging video lectures that students will actually watch by Simuelle Myers

# Thank You!



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