

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

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

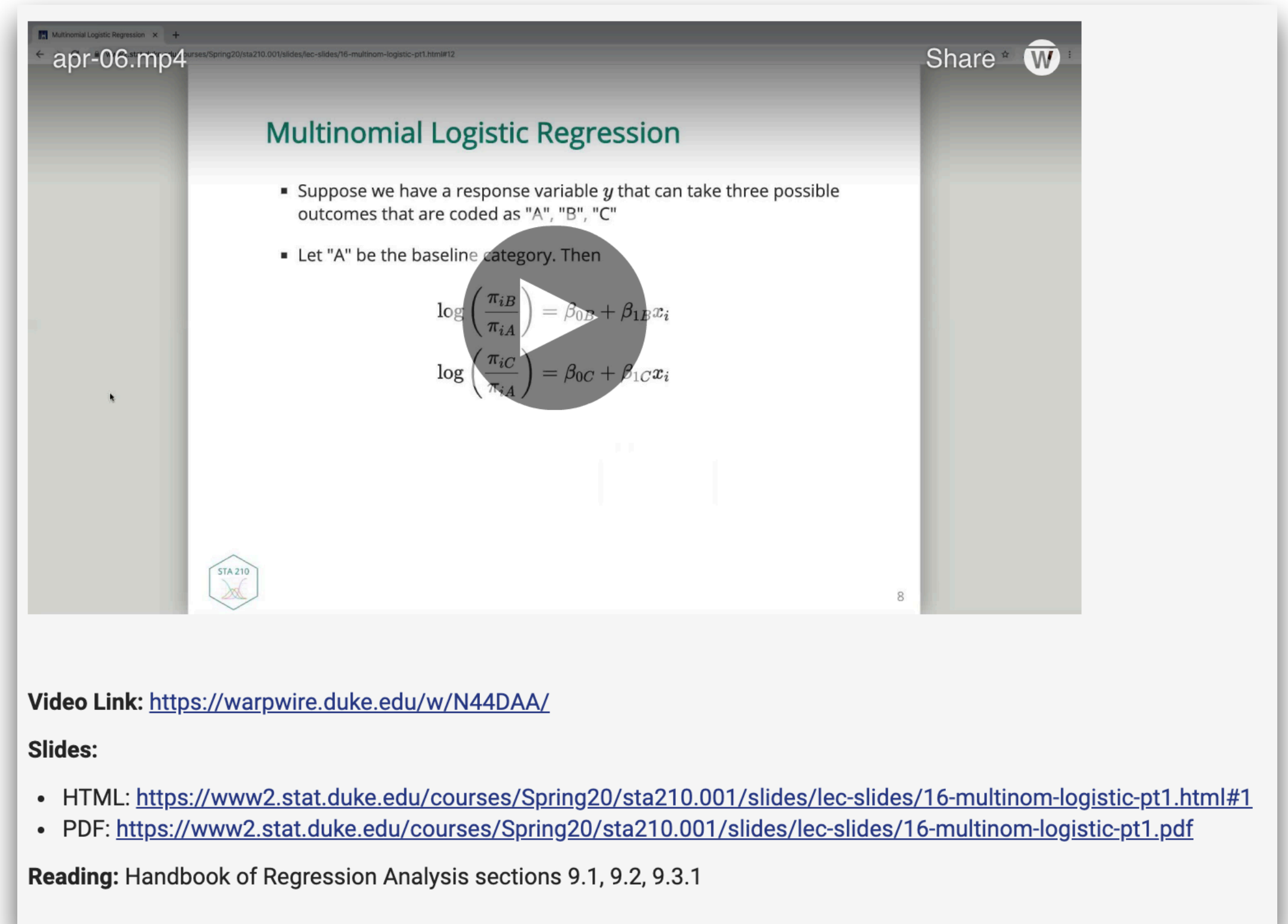
+

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'. It contains two bullet points: 'Suppose we have a response variable y that can take three possible outcomes that are coded as "A", "B", "C"' and 'Let "A" be the baseline category. Then'. Below these are two log-odds equations: $\log\left(\frac{\pi_{iB}}{\pi_{iA}}\right) = \beta_{0B} + \beta_{1B}x_i$ and $\log\left(\frac{\pi_{iC}}{\pi_{iA}}\right) = \beta_{0C} + \beta_{1C}x_i$. A pie chart is partially visible behind the equations. The slide number '8' is in the bottom right corner. Below the video player, there is a 'Video Link' section with a URL, a 'Slides' section with HTML and PDF links, and a 'Reading' section with a reference to the Handbook of Regression Analysis.

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

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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