

COMM 7790

STATISTICAL APPLICATIONS IN COMMUNICATION II

SPRING 2025

Faculty Instructor:

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Student hours: Mondays 10:00am – 12:00pm EST, or by appointment, in Derby Hall 3045B

Course Location:

Journalism Building 224

Time: Tuesdays and Thursdays from 3:55pm – 5:15pm

Course description

This course intends to provide a foundation for basic statistical techniques in communication research, with a focus on ANOVA and regression analyses. Focus is on conceptual understanding rather than mathematical computation. Students will gain hands-on experience practicing their learning through various assignments using R software.

Course learning outcomes

- Students will develop a clear conceptual understanding of simple and multiple regression, analysis of variance and covariance, moderation, and data visualization. Other topics in linear models may be introduced as time allows.
- Students will acquire skills to select and implement the appropriate aforementioned statistical models. By the end of the course, students will be able to correctly formalize their theoretical hypotheses using statistical models, apply statistical tests, identify model assumptions, interpret model parameters, perform model comparisons, and report the analysis and results in APA style.
- Students will gain experience using R software to test these statistical models.

Mode of delivery

This course will be in-person for this semester, but we will use the online Zoom format only when necessary (e.g., work travel – as already noted in the course schedule, medical reasons, health concerns). We will use Carmen to organize the course lectures, assignments, and other materials. Assignments should be submitted via Carmen as well.

Each student should install R and RStudio on their own computer for all the in-class exercises and take-home assignments.

Attendance

To do well in this course it is **HIGHLY RECOMMENDED** that you attend class. There is no formal attendance policy in this course because you are graduate students, but missing class may lead to falling behind in the course material.

Course materials

There is no required textbook for this course. All reading materials will be provided on Carmen.

Course technology

Technology support

For help with your password, university email, Carmen, or any other technology issues, questions, or requests, contact the Ohio State IT Service Desk. Standard support hours are available at ocio.osu.edu/help/hours, and support for urgent issues is available 24/7.

- Self-Service and Chat support: ocio.osu.edu/help
- Phone: 614-688-4357(HELP)
- Email: servicedesk@osu.edu
- TDD: 614-688-8743

Technology skills needed for this course

- Basic computer and web-browsing skills
- Navigating Carmen (go.osu.edu/canvasstudent)
- CarmenZoom virtual meetings (go.osu.edu/zoom-meetings)

Required equipment

- Computer: current Mac (MacOs) or PC (Windows 10) with high-speed internet connection
- Microphone: built-in laptop or tablet mic or external microphone
- Other: a mobile device (smartphone or tablet) to use for BuckeyePass authentication

Required software

- Microsoft Office 365: All Ohio State students are now eligible for free Microsoft Office 365. Full instructions for downloading and installation can be found at go.osu.edu/office365help.
- R and RStudio

Carmen access

You will need to use BuckeyePass (buckeyepass.osu.edu) multi-factor authentication to access your courses in Carmen. To ensure that you can connect to Carmen at all times, it is recommended that you take the following steps:

- Register multiple devices in case something happens to your primary device. Visit the BuckeyePass - Adding a Device help article for step-by-step instructions (go.osu.edu/add-device).
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click Enter a Passcode and then click the Text me new codes button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- Download the Duo Mobile application (go.osu.edu/install-duo) to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357(HELP) and IT support staff will work out a solution with you.

Grading

This class has 1000 possible points, which are distributed as follows:

Weekly Question Submissions (x10)	100 points (10 points each)
Weekly Homework Assignments (x10)	400 points (40 points each)
Final Presentation	250 points
Final Paper	250 points

Assignments

- **Weekly Question Submissions (10 points x 10).** You will be expected to review the assigned readings and share your questions/thoughts prior to (most) Tuesday class sessions each week.
 - Prior to our Tuesday class, you will be expected to submit 3 – 5 questions about the assigned readings for the week.
 - There should be at least one question per assigned reading.
 - These questions are intended to help me identify areas that need more attention in

class. Please provide sufficient detail/context in your question so I can understand the problem. Ultimately, my goal is to use these questions to tailor my lectures and assignments to your needs.

- If you do not have a question about a particular reading, please briefly summarize the key points of the reading.
 - Questions are due **Tuesdays at 9am** during the marked weeks on the syllabus.
 - **Note: There are 11 question submission opportunities throughout the semester. Your lowest discussion grade will be dropped – i.e., only your 10 best scores count towards your grade.**
- **Weekly Homework Assignments (40 points x 10).** You will be expected to complete a take-home assignment that will ask you to apply the past week's material.
 - Homework assignments will be a mix of practice problems, conceptual questions, and applications to your own data.
 - Homework assignments are expected to be completed individually. However, research is often a collaborative venture, so please feel free to seek high-level help, such as when de-bugging code. All submitted material, though, should reflect the student's own work.
 - Home assignments will be due **Thursdays at 9am** during the marked weeks on the syllabus.
 - **Note: There are 11 homework assignment opportunities throughout the semester. Your lowest discussion grade will be dropped – i.e., only your 10 best scores count towards your grade.**
- **Final Presentation (250 points).** At the end of the semester, students will share conference-style presentations on an individual research project using a statistical approach learned during the semester.
 - Presentations will be 12 minutes with 5 – 7 minutes for questions.
 - Presentations will emphasize the statistical approach in greater depth than a typical conference presentation.
 - Additional details about the presentation will be provided in class (and on Carmen).
 - Presentations will occur during the last two weeks of the semester.
- **Final Paper (250 points).** Accompanying the final presentation, students will submit a final paper that provides greater depth about their individual research project.
 - The final paper will not be a full empirical paper. Instead, emphasis will be placed on the Methods and Results section (along with figures/tables), with a relatively brief Introduction and Discussion section at the beginning and end, respectively.
 - The final paper will use APA format.
 - Additional details about the paper will be provided in class (and on Carmen).
 - The final paper is due during finals week.

Late assignments

All deadlines are in Eastern Standard Time (EST). Submitting work after the deadline yields a -10% point penalty for the submission. For each additional day after the deadline, students lose an additional -10% off the submission.

Extensions: Students may receive an extension for an assignment if they **contact me 48 hours prior to the submission deadline**. The length of an extension will be evaluated on a case-by-case basis.

Grading scale

Please note that Carmen Canvas, OSU's grading and class management software, does not round fractions up. Please take that into account in computing grades. I do not manually round up grades. The official grading scale is as follows:

93 – 100: A
90 – 92.9: A-
87 – 89.9: B+
83 – 86.9: B
80 – 82.9: B-
77 – 79.9: C+
73 – 76.9: C
70 – 72.9: C-
67 – 69.9: D+
60 – 66.9: D
Below 60: E

Faculty feedback and response time

Grading and feedback

For weekly assignments, you can generally expect feedback within **7 days**. If it is going to take longer than 7 days, you will receive a course announcement from me.

E-mail

I will reply to e-mails within **24 hours on school days**. I do not respond to emails over the weekend, and I do not expect you to respond to emails over the weekend. Please email me through OSU email and not the Carmen messaging system, as Carmen sometimes does not notify me that I have an unread message.

University Policies

Student Academic Services

Arts and Sciences Advising and Academic Services' website provides support for student academic success. Information on advising issues such as tutoring, transfer credits, academic standing, and contact information for Arts and Sciences advisors can be obtained through this website. The site is: <http://advising.osu.edu>.

Student Services

The Student Service Center assists with financial aid matters, tuition and fee payments. Please see their site at: <https://contactbuckeyelink.osu.edu/>

Copyright Disclaimer

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Additional Disclaimer

This syllabus represents a contract “in the works.” Events that transpire over the semester may require modifications to the course. In the event of a change, I will announce the change and update the syllabus on Carmen. Ultimately it is your responsibility to keep up with any such modifications and to be aware of current policies, deadlines, etc. I reserve the right to modify course policies throughout the semester.

Creating an Environment Free from Harassment, Discrimination, and Sexual Misconduct

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

1. Online reporting form at equity.osu.edu,
2. Call 614-247-5838 or TTY 614-688-8605,
3. Or Email equity@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Interim Ohio State Title IX Coordinator, Molly Peirano, at titleix@osu.edu

Mental Health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating, and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you are or someone you know is suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life's Counseling and Consultation Service (CCS) by visiting ccs.osu.edu or calling 614--292--5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at 614-292-5766. If you are thinking of harming yourself or need a safe, non-judgmental place to talk, or if you are worried about someone else and need advice about what to do, 24-hour emergency help is also available through the Suicide Prevention Hotline (Columbus: 614-221-5445).

COVID-19 and Illness Policies

University COVID policies

The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through

the university's [request process](#), managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. **SLDS contact information:** slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Health and safety requirements

All students, faculty and staff are required to comply with and stay up to date on all university safety and health guidance (<https://safeandhealthy.osu.edu>). Non-compliance will result in a warning first, and disciplinary actions will be taken for repeated offenses.

Student illness or absence

If *you* are too ill to participate in this course due to COVID-19 or another illness, please contact the instructor as soon as you are able. All materials will be made available on Carmen, including lecture recordings and slides. Alternate assignments or extensions may be arranged.

Instructor illness or absence

If the *instructor* is too ill to teach the course for a period of time, the designated backup for this course will step in. You will be notified via email from the School of Communication.

Academic Integrity Policy

See **Descriptions of major course assignments**, above, for my specific guidelines about collaboration and academic integrity in the context of this online class.

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term “academic misconduct” includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

Furthermore, there are now many new generative AI tools, such as ChatGPT, available and their use in certain situations may violate academic integrity policies. **In this course, you may not submit material for assignments (e.g., final paper) that were created using generative AI as if it is your own work; this constitutes plagiarism and will be considered a violation of academic integrity.**

If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the university's Code of Student Conduct

(i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university. If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- Committee on Academic Misconduct web page (go.osu.edu/coam)
- Ten Suggestions for Preserving Academic Integrity (go.osu.edu/ten-suggestions)

Requesting accommodations

The university strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability including mental health, chronic or temporary medical conditions, please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. **SLDS contact information:** slds@osu.edu; 614-292-3307; 098 Baker Hall, 113 W. 12th Avenue.

Accessibility of course technology

This online course requires use of CarmenCanvas (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- Canvas accessibility (go.osu.edu/canvas-accessibility)
- Streaming audio and video
- CarmenZoom accessibility (go.osu.edu/zoom-accessibility)
- Collaborative course tools

Land Acknowledgement

We would like to acknowledge the land that The Ohio State University occupies is the ancestral and contemporary territory of the Shawnee, Potawatomi, Delaware, Miami, Peoria, Seneca, Wyandotte, Ojibwe and Cherokee peoples. Specifically, the university resides on land ceded in the 1795 Treaty of Greenville and the forced removal of tribes through the Indian Removal Act of 1830. I/We

want to honor the resiliency of these tribal nations and recognize the historical contexts that has and continues to affect the Indigenous peoples of this land. More information on OSU's land acknowledgement can be found here: <https://mcc.osu.edu/about-us/land-acknowledgement>

Course Schedule/Spring 2025

Week	Topic	Reading	Assignment due Dates
Week 1			
Jan 7	Intro to Course	Syllabus	Download R & RStudio
Jan 9	Descriptive Statistics & Data Visualization		
Week 2			
Jan 14	ANOVA Review: 2x2 and interaction effects		Question Submission #1
Jan 16	Review continued + Writing a Methods Section		Homework #1
Week 3			
Jan 21	Contrasts and Multiple Comparisons		Question Submission #2
Jan 23	Within-Subjects/Repeated Measures ANOVA		Homework #2
Week 4			
Jan 28	Mixed ANOVA		Question Submission #3
Jan 30	ANOVA Catch up + Visualization		Homework #3
Week 5			
Feb 4	ANOVA Assumptions, Diagnostics, and Model Evaluation		Question Submission #4
Feb 6	Intro to Regression		Homework #4

Week 6			
Feb 11	Linear Regression with a Single Predictor		Question Submission #5
Feb 13	Linear Regression with a Single Predictor & Connections to ANOVA		Homework #5
Week 7			
Feb 18	Linear Regression with Multiple Predictors		Question Submission #6
Feb 20	Linear Regression & Covariates		Homework #6
Week 8			
Feb 25	Regression Assumptions, Diagnostics, and Model Evaluation I		Question Submission #7
Feb 27	Regression Assumptions, Diagnostics, and Model Evaluation II		Homework #7
Week 9			
March 4	Logistic Regression		Question Submission #8
March 6	Regression with other Non-normal Outcomes Zoom Class!		Homework #8
Week 10			
March 11	Spring break!	None	None
March 13	Spring break!	None	None

Week 11			
March 18	Linear Regression & Nonlinear Relationships		Question Submission #9
March 20	Catch up + Conference Presentation Discussion		Homework #9
Week 12			
March 25	Moderation & Interaction Effects I		Question Submission #10
March 27	Moderation & Interaction Effects II		Homework #10
Week 13			
April 1	Intro to Mediation		Question Submission #11
April 3	Real World Regression Problems		Homework #11
Week 14			
April 8	Wrap-up		
April 10	Conference presentations	None	None
Week 15			
April 15	Conference presentations	None	None
April 17	Conference presentations	None	None
Finals			
April 21	None	None	Final paper due April 25
April 25			

~ This schedule is subject to change per the needs of the course ~