

## Course Syllabus

BIOS 889: Preparation for research in Biostatistics  
Spring 2025  
1 Credit

### Course Description

Many of the skills needed to become an effective researcher in the fields of Statistics and Biostatistics are learned indirectly during the early stages of an academic career. In this course, students will take a more direct approach. Through readings and class discussions with peers, students will try to understand what makes for compelling statistical research. Through statistical simulations, oral presentations, and written reports, students will reproduce the primary results of a statistical article of their choosing.

**Prerequisites:** Completion of the Department of Biostatistics PhD qualifying exams

### Instructor

- Jordan Bryan, PhD
- Postdoctoral Research Associate
- Department of Biostatistics
- McG 3103E
- Phone: 919-###-####
- Email: [jbry@unc.edu](mailto:jbry@unc.edu)

### Teaching Assistant

- TBD

**Office Hours:** TBD

**Course Website:** On Canvas, use your ONYEN and password.

**Class Days, Times, Location:** TBD

### Course Format

This course will meet once per week. Class meetings will consist of a mix of workshop-style discussions, short lectures, and presentations from students followed by sessions for questions and critiques. Students are expected to complete any assigned readings before class and come to each class prepared to discuss the texts.

## Required Readings

TBD

## Course-at-a-Glance

The instructor reserves the right to make changes to the syllabus, including topics, readings, assignments, and due dates. Any changes will be announced as early as possible.

For week-by-week course details, please see below. All assignments and readings should be completed **before** attending class each week except for Week 1.

Date/ Session Number	Topic	Assignment Due
January 13 <sup>th</sup>	Course intro	
January 27 <sup>th</sup>	Reading recaps + group discussions	Reading #1
February 3 <sup>rd</sup>	Reading recaps + group discussions	Reading #2
February 17 <sup>th</sup>	Reading recaps + group discussions	Reading #3
February 24 <sup>th</sup>	Understanding and reproducing theoretical results using simulation	Choice of statistical article for semester focus
March 3 <sup>rd</sup>	Writing a statistical research article	Reading #4
March 17 <sup>th</sup>	Being a journal referee and writing reviews for statistical research articles	Interim reports (simulation demonstration)
March 24 <sup>th</sup>	Sharing peer reviews + group discussions	Peer review of interim reports group #1
March 31 <sup>st</sup>	Sharing peer reviews + group discussions	Peer review of interim reports group #2
April 7 <sup>th</sup>	Presenting statistical research: lab meetings + conferences	Reading #5
April 14 <sup>th</sup>	Student presentations group #1	Presentation slides for students in group #1
April 21 <sup>st</sup>	Student presentations group #2	Presentation slides for

		students in group #2
April 28 <sup>th</sup>	Careers in statistical research	Final Reports

## Course Assignments and Assessments

This course will include the following graded assignments that contribute to your final grade in the course.

Graded Assignments	% of Final Course Grade
1. Class Discussions + Article Comprehension	15
2. Peer Review	10
3. Interim Report	25
4. Presentation	25
5. Final Report	25
<b>Total</b>	<b>100</b>

## Course Grading Scale(s)

Final course grades will be determined using the following [UNC Graduate School grading scale](#). The relative weight of each course component is shown in the Graded Assignments section.

- **H**—High Pass (93-100): Clear excellence
- **P**—Pass (80-92): Entirely satisfactory graduate work
- **L**—Low Pass (70-79): Inadequate graduate work
- **F**—Fail (0-69)

## Learning Objectives

Upon completion of this course, a student should be able to:

1. Read and comprehend a statistical research article
2. Discuss the content of a statistical research article with peers
3. Reproduce results from a statistical research article using simulations
4. Effectively present the content of a research article to a statistical audience
5. Effectively describe the content and import of a statistical research article in writing

## Expectations, Policies, and Resources

### Accessibility at UNC Chapel Hill

The University of North Carolina at Chapel Hill facilitates the implementation of reasonable accommodations, including resources and services, for students with disabilities, chronic medical conditions, a temporary disability or pregnancy complications resulting in barriers to fully accessing University courses, programs and activities. Accommodations are determined through the Office of Accessibility Resources and Service (ARS) for individuals with documented

qualifying disabilities in accordance with applicable state and federal laws. See the [ARS Website](#) for contact information or [email ARS](#).

### **Attendance/ Participation**

Your attendance and active participation are an integral part of your learning experience in this course. If you are unavoidably absent, please notify the course instructor (and Teaching Assistant if one is assigned). No right or privilege exists that permits a student to be absent from any class meetings, except for these University Approved Absences:

1. Authorized University activities
2. Disability/religious observance/pregnancy, as required by law and approved by [Accessibility Resources and Service](#) and/or the [Equal Opportunity and Compliance Office](#).
3. Significant health condition and/or personal/family emergency as approved by the [Office of the Dean of Students](#), [Gender Violence Service Coordinators](#), and/or the [Equal Opportunity and Compliance Office](#).

### **Course Communication Expectations**

Students must maintain course communications (e.g., email, course announcements, course discussions, etc.) with their peers and instructor(s) to be successful in this course. You are expected to check, read, and respond when necessary to your course communications regularly (i.e., at least two times during the business week). Not reading email is an unacceptable excuse for missing course communications.

Student well-being is my primary concern. To ensure you have the support needed to be successful in this program, your academic coordinator, faculty mentor, assistant dean of master's degree programs, associate dean for student affairs, and/or dean of students may get involved if non-responsiveness becomes a significant concern.

All UNC affiliates (including students, faculty, and staff) must use their University email account to conduct UNC business. Use of personal email addresses, including auto-forwarding to external/personal accounts, is not allowed for conducting University business. For more information, see the [Individual Email Address Policy](#).

### **Counseling and Psychological Services (CAPS) at UNC Chapel Hill**

[CAPS](#) is strongly committed to addressing the mental health needs of our diverse student body through timely access to consultation and connection to clinically appropriate services. They offer a [variety of services](#) to meet your mental health needs and are available 24/7. Note: All counseling services provided are completely confidential and in no way connected to your academic record.

## Honor Code

I expect all students to follow the guidelines of the UNC Honor Code. In particular, students are expected to refrain from “lying, cheating, or stealing” in the academic context. You can read more about the honor code at [studentconduct.unc.edu](https://studentconduct.unc.edu).

As a student at UNC Chapel Hill, you are bound by the [university's Honor Code](#), through which UNC maintains standards of academic excellence and community values. It is your responsibility to learn about and abide by the code. To ensure an effective Honor System at UNC, in this course students are expected to:

- Conduct all academic work within the letter and spirit of the Honor Code, which prohibits the giving or receiving of unauthorized aid in all academic processes.
- Learn and apply the recognized techniques of proper attribution of sources used in written work; and to identify allowable resource materials or aids to be used during completion of any graded work.

Students may use materials they wrote for other courses, but only if the student themselves produced the work.

If you have any questions about your rights and responsibilities, consult the [Office of Student Conduct](#) or review the following resources: [Honor System](#); [Honor System module](#); [UNC Library's plagiarism tutorial](#); [UNC Writing Center's handout on plagiarism](#).

## Use of Generative AI

Generative artificial intelligence (AI) tools (e.g., ChatGPT) that generate text, images, and media, could aid brainstorming, research, and content creation, and may be useful in public health practice. However, these tools must be used ethically, transparently, and with the understanding of their limitations including circumstances when AI use hinders rather promotes learning.

In this course, the use of Generative AI for coursework is strictly prohibited. Because of the nature of the learning in this course, this policy maintains academic integrity and upholds the principles of originality and individual effort when you submit coursework.

Some specific examples: in this course, you may not use Generative AI to

- Produce summaries of assigned course readings
- Complete mathematical computations and/or proofs
- Produce any text or graphics for submitted assignments

If you have any questions, please contact me. I reserve the right to submit written assignments to AI detection programs (e.g., iThenticate). Suspected violations will be reported to the University Honor Court.

## iThenticate

[iThenticate](#) is a writing tool to help ensure that scholarly and research documents such as written assignments, manuscripts, theses, dissertations, and grant applications follow proper

citation practices. You may choose to use this software to improve your writing and citations. However, your instructor reserves the right to use the software if any written assignment is suspected of having un-cited or improperly cited work.

### **Appropriate Use of Course Resources**

The materials used in this class, including, but not limited to, syllabus, exams, quizzes, and assignments are copyright protected works. Any unauthorized copying of the class materials is a violation of federal law and may result in disciplinary actions being taken against the student. Additionally, the sharing of class materials without the specific, express approval of the instructor may be a violation of the University's Student Honor Code and an act of academic dishonesty, which could result in further disciplinary action. This includes, among other things, uploading class materials to websites for the purpose of sharing those materials with other current or future students and sharing assessments from prior terms. Instructors are required to report suspected misuse of course resources to the Office of Student Conduct.

You are not permitted to upload any content from this course to the web in any form, including but not limited to Chegg, Course Hero, Coursera, Google Drive, etc. If you post my course content, you may be violating my intellectual property rights. If you post your own work from this course, you are allowing sites to profit from your intellectual property. In utilizing web sources to upload or download course content, you risk violating the [University's Honor Code](#).

### **Inclusive Excellence**

We are committed to expanding diversity and inclusiveness across the School — among faculty, staff, students, on advisory groups, and in our curricula, leadership, policies and practices. We measure diversity and inclusion not only in numbers, but also by the extent to which students, alumni, faculty, and staff members perceive the School's environment as welcoming, valuing all individuals, and supporting their development.

For more information about how we are practicing inclusive excellence at the Gillings School, visit the following webpages: [Inclusive Excellence](#), [Inclusive Excellence Action Plan](#), [Minority Health Conference](#), and [National Health Equity Research Webcast](#).

Additional campus resources include: the [LGBTQ Center](#); [Non-Discrimination Policies at UNC Chapel Hill](#); [Ombuds](#); and [Prohibited Discrimination, Harassment, and Related Misconduct at UNC Chapel Hill](#).

In this class, we practice the Gillings School's commitment to inclusion, diversity, anti-racism and equity in the following ways.

- Develop classroom participation approaches that acknowledge the diversity of ways of contributing in the classroom and foster participation and engagement of *all* students.
- Structure assessment approaches that acknowledge different methods for acquiring knowledge and demonstrating proficiency.
- Encourage and solicit feedback from students to continually improve inclusive practices.

- Treat all members of the Gillings community (students, faculty, and staff) as human persons of equal worth who deserve dignity and respect, even in moments of conflict and disagreement.
- Contribute to creating a welcoming and inclusive classroom environment, where all are able to learn and grow from one another.
- Acknowledge and respect the diversity of experiences that others bring to the classroom and the ways in which this richness enhances everyone's learning
- Strive to maintain a spirit of curiosity and generosity, particularly in the face of new and/or seemingly contradictory information and perspectives Encourage and solicit feedback from students to continually improve inclusive practices.

### **Land Acknowledgement**

Please read The Gillings School's [Land Acknowledgement](#).

### **Student Feedback and Equity Concerns**

Please use the [Student Academic Complaint Process](#) for issues related to administrative processes, curriculum, academic and/or classroom activities. We also value your feedback and suggestions including specific equity concerns and bias-related issues. You can use this form to submit feedback and suggestions, both positive and negative, and share equity related issues. This form will allow you to specifically describe incidents in which racial or other equity-related bias, or microaggressions, occurred. You may submit this form anonymously. However, for us to follow up and provide the necessary support, we encourage you to include your contact information. For further information, please visit the [Student Feedback and Equity Concerns FAQ](#). Please note that this form does not take the place of any University process or policy. If you would like to report an incident under the University's policy on [Prohibited Discrimination, Harassment, and Related Misconduct including Sexual and Gender Based Harassment, Sexual Violence, Interpersonal Violence, and Stalking](#), please visit [Safe at UNC](#) or the [Equal Opportunity and Compliance Office](#) (EOC) for additional information, including resources, contact, and reporting options.

### **Technical Support**

The best way to help prevent technical issues from causing problems for assignments and quizzes is to submit them at least 24-36 hours before the due date and time. Your instructor cannot resolve technical issues, but it's important to notify them if you are experiencing issues.

The ITS department provides technical support 24-hours per day, seven days per week. If you need computer help, please contact the ITS Help Desk by phone at +1-919-962-HELP (4357), or by [online help request](#), or by [UNC Live Chat](#).

### **Safety and Emergency Information at Gillings**

Though unlikely, there is always a possibility that there might be some type of emergency during the semester. Emergencies come in many different forms – weather, medical, fire and ones involving people intending to do harm.

As you probably know from your own experience, pre-K through 12th-grade students prepare in advance for emergency situations. As college students, you too need to think in advance about emergency situations. I would like to take a few moments to talk about actions to take in the event of an emergency in our classroom setting.

**If there is an emergency, I will stop teaching right away.**

- When it is safe to do so, we will call 9-1-1 and identify our building and room number, as well as the issue.
- There are some areas on campus, such as indoors, where you can't hear the Alert Carolina siren. The first warning of an emergency may come to our attention via a messenger at the classroom door or through a personal electronic device.
- If you see or experience something unusual or concerning – before, during or after class – that may lead to an emergency, please let me or another faculty member/administrator or Gillings School security know as soon as possible. Alert me even if you have only an inkling that something may not be right.

**It is very important that you make me aware.**

***In a weather emergency***, you may not be able to hear the emergency siren if you are inside of a building. If you are inside, move to an interior room on the lowest floor, and stay away from windows. ***In a medical/mental health emergency***, please make space for first responders to do their work. UNC Police, Fire Department and EMS respond to all medical calls on campus. ***In the case of fire***, do not attempt to carry anything in your hands. Exit quickly in as orderly a way as possible. Help others as much as possible. ***In a situation in which one or more people intend to do harm***, assess the situation and make a decision. Unfortunately, there may not be a clear “right” answer. However, your circumstances may make one of these actions the only viable option to protect yourself.

- **Run:** Have an escape route and plan in mind, leave your belongings behind, keep your hands visible, exit the building as quickly and safely as possible, distancing yourself from the threat, and follow law enforcement's direction.
- **Hide:** If you cannot safely evacuate your building or are unsure of the location of the threat, secure your room, classroom or office, creating as many barriers between you and the threat. If you are caught outside, seek shelter inside the nearest building, and secure an interior space. Take the following actions: Lock or secure doors, turn off lights, move into concealed areas of the room away from doors and windows, silence your mobile devices and remain calm and quiet.
- **Fight:** Use this as a last resort if your life is in imminent danger. If there are no other options to safely escape and you are confronted by the intruder, attempt to disrupt or incapacitate the intruder using all available resources (e.g., acting aggressively, yelling, throwing items, improvising weapons).

If you need to exit the building in an emergency, seek cover behind buildings, cars and other solid structures – go as far away as possible while still staying safe. Keep going until you know that you are out of danger.

**Here is what you need to do next:**



Take the time you need to identify the different entrances and exits in this room and this building. There are many ways in and out of this building. The next time you come to class, think about possible routes. Try different routes so you are aware.

Be better prepared for UNC-specific safety procedures by visiting [Carolina Ready](#).

**Important Contacts:**

- **Emergencies, anywhere: Call 911**
- **Gillings School Resources:**
  - **Gillings DPS Security:** (919) 357-8037
  - **Building Issues:** (919) 843-7872
  - **Gillings Student Affairs:** (919) 966-2499

**Title IX at UNC Chapel Hill**

Any student who is impacted by discrimination, harassment, interpersonal (relationship) violence, sexual violence, sexual exploitations, or stalking is encouraged to seek resources on campus or in the community. Please contact the Director of Title IX Compliance / Title IX Coordinator ([Adrienne Allison](#)), [Report and Response Coordinators in the Equal Opportunity and Compliance Office](#), Counseling and Psychological Services (confidential), or the [Gender Violence Services Coordinators](#) (confidential) to discuss your specific needs. Additional resources are available at the ["Safe at UNC" website](#).

**Syllabus Changes**

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