

# STOR 155-003

## Introduction to Data Models and Inference

*Data analysis; correlation and regression; sampling and experimental design; basic probability (random variables, expected values, normal and binomial distributions); hypothesis testing and confidence intervals for means, proportions, and regression parameters; use of spreadsheet software.*

### Course Goals and Learning Objectives

*This course will enable you to:*

- explore data by describing patterns and departures from patterns;
- consider the roles of sampling and experimentation in study design and implementation;
- explore random phenomena using probability and simulation; and
- estimate population parameters and testing hypotheses through methods of statistical inference.

### Course Structure

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| Instructor             | Dr. Mario Giacomazzo<br>Phone: 480-489-1398<br>Email: <a href="mailto:mgiacoma@email.unc.edu">mgiacoma@email.unc.edu</a><br>Office Hours: Mondays, 12:30PM to 4:30PM in Hanes 134                                                                   |
| Teaching Assistant     | Srivatsa Balaji<br>Email: <a href="#">TBD</a><br>Office Hours: TBD                                                                                                                                                                                  |
| Course Website         | Main: <a href="https://supermariogiacomazzo.github.io/STOR155_WEBSITE/">https://supermariogiacomazzo.github.io/STOR155_WEBSITE/</a><br>Canvas (Grades): <a href="https://edtech.unc.edu/service/canvas/">https://edtech.unc.edu/service/canvas/</a> |
| Lectures               | TTh, 5:00PM to 6:15PM in Hanes 120                                                                                                                                                                                                                  |
| Open Tutorial Sessions | Sunday to Thursday from 7PM to 8PM                                                                                                                                                                                                                  |
| Course Texts           | OpenIntro Statistics, 4 <sup>th</sup> Edition by Diez, Barr, and Rundel.                                                                                                                                                                            |
| Course Format          | The course format will include two weekly lectures.                                                                                                                                                                                                 |
| Credit hours           | 3                                                                                                                                                                                                                                                   |
| Prerequisites          | Math 110 or exemption                                                                                                                                                                                                                               |
| Target Audience        | This course is designed for Statistics and Analytics majors and students from other majors who require experience with statistical skills for data analysis                                                                                         |

## Course Grading

| Assessments | Date                | Percent | A  | 93 or above | C+ | 77 to 79.99 |
|-------------|---------------------|---------|----|-------------|----|-------------|
| Attendance  | Weekly              | 5%      | A- | 90 to 92.99 | C  | 73 to 76.99 |
| Homework    | Weekly              | 10%     | B+ | 87 to 89.99 | C- | 70 to 72.99 |
| Midterm 1   | 2-Oct               | 25%     | B  | 83 to 86.99 | D+ | 67 to 69.99 |
| Midterm 2   | 13-Nov              | 25%     | B- | 80 to 82.99 | D  | 60 to 66.99 |
| Final Exam  | 12-Dec<br>(4PM-7PM) | 35%     |    |             | F  | Below 60    |

## Course Assessments

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| Attendance | <p>If you are not in attendance for <b>at least 70%</b> of the lectures, you will get a 0% for your attendance grade. Otherwise, you will receive a 100%. We will be using the UNC Check-in App to take attendance. Information about this can be found here: <a href="https://unccheckin.unc.edu/#studentFAQ">https://unccheckin.unc.edu/#studentFAQ</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Homework   | <p>All sections of STOR 155 will be using WebAssign for homework. You will need to log onto <a href="http://www.webassign.net">www.webassign.net</a> and enter the class key <b>unc 0937 8893</b> to be added to my class. If you need assistance with your first login, ask your Instructor or IA. This needs to be done by <b>August 21, 2025</b>.</p> <p>Homework will be assigned almost every week. Due dates will be announced in class and always be due at 11:59PM. To receive credit, you must have completed the homework in WebAssign by the due date. No extensions will be given ever. Homework assignments will vary in weight. The average number of points across all assignments will be added twice to the total number of earned points.</p> <p>Any dispute on the grading of a homework assignment should be brought to either your instructor or IA within 1 week after the due date of an assignment. Questions on individual problems should be asked via Webassign's messaging capabilities.</p> |
| Exams:     | <p>Midterms and the final exam are required and there are no make-up exams unless your absence is approved by the university or by me. If you request that I approve your absence, I will require documentation. Failure to get a university approved absence or provide documentation to me, could result in a 0%. <b>Please notify Dr. Mario as soon as you become aware of an exam conflict so that a make-up exam can be scheduled in a timely matter.</b></p> <p>You cannot have three finals within a 24 hour period, and therefore you will need to be excused from the regularly scheduled final exam. In this scenario, you must obtain a Dean's excuse and discuss the situation with me at least two weeks before the regularly scheduled final exam so that an alternative arrangement can be made.</p>                                                                                                                                                                                                      |

## Course Policies and Resources

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| Community Standards    | <p>As noted in the <a href="#">Updated Community Standards</a>, face masks are still required in all University buildings. As such, the following statement should also be included on course syllabi for in-person classes. Please share this statement with your department's Fall 2021 instructors:</p> <p><i>"This semester, while we are in the midst of a global pandemic, all enrolled students are required to wear a mask covering your mouth and nose at all times in our classroom. This requirement is to protect our educational community — your classmates and me — as we learn together. If you choose not to wear a mask, or wear it improperly, I will ask you to leave immediately, and I will submit a report to the <a href="#">Office of Student Conduct</a>. At that point you will be disenrolled from this course for the protection of our educational community. Students who have an authorized accommodation from Accessibility Resources and Service have an exception. For additional information, see <a href="#">Carolina Together</a>."</i></p> |
| Tutorial               | <p>Every Sunday through Thursday evening, a tutorial will be offered remotely on Zoom from 7:00PM - 8:00 PM. You can access these meetings using the link: <a href="https://unc.zoom.us/j/96480984956">https://unc.zoom.us/j/96480984956</a>. These sessions are run by experienced Instructional Assistants who enjoy tutoring in statistics. Take advantage of their services!</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Attendance Policy      | <p>No right or privilege exists that permits a student to be absent from any class meetings, even online classes, except for these University Approved Absences: Authorized University activities, and disability/religious observance/pregnancy, as required by law and approved by <a href="#">Accessibility Resources and Service</a> and/or the <a href="#">Equal Opportunity and Compliance Office</a> (EOC)</p> <p>Significant health condition and/or personal/family emergency as approved by the <a href="#">Office of the Dean of Students</a>, <a href="#">Gender Violence Service Coordinators</a>, and/or the <a href="#">Equal Opportunity and Compliance Office</a> (EOC).</p>                                                                                                                                                                                                                                                                                                                                                                                     |
| Technology Use         | <p>You are welcome to bring a calculator to class. We will also use Excel on your laptops frequently.</p> <p>Technology can support student learning, but it can also become a distraction. You should not use laptops or other devices for entertainment during class and should not display any material on the laptop which may be distracting or offensive to your fellow students. Laptops should only be used for legitimate classroom purposes, such as coding, taking notes, or downloading class information from Sakai. E-mail, messaging, surfing the Internet, reading the news, or playing games are not considered legitimate classroom purposes. Such inappropriate laptop use is distracting to those seated around you and is unprofessional.</p>                                                                                                                                                                                                                                                                                                                |
| Learning Cooperatively | <p>We encourage you to discuss course content with your friends and classmates as you are working on your weekly assignments. No matter what your academic background, you will definitely learn more in this class if you work with others than if you do not. Ask questions, answer questions, and share ideas liberally.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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| Accessibility Resources               | UNC-Chapel Hill facilitates the implementation of reasonable accommodations for students with learning disabilities, physical disabilities, mental health struggles, chronic medical conditions, temporary disability, or pregnancy complications, all of which can impair student success. See the ARS website for contact and registration information: <a href="https://ars.unc.edu/about-ars/contact-us">https://ars.unc.edu/about-ars/contact-us</a>                                                                                                                                                                                                                                                                                                                                                                    |
| Counseling and Psychological Services | CAPS is strongly committed to addressing the mental health needs of a diverse student body through timely access to consultation and connection to clinically appropriate services, whether for short or long-term needs. Go to their website: <a href="https://caps.unc.edu/">https://caps.unc.edu/</a> or visit their facilities on the third floor of the Campus Health Services building for a walk-in evaluation to learn more.                                                                                                                                                                                                                                                                                                                                                                                         |
| Title IX                              | Any student who is impacted by discrimination, harassment, interpersonal (relationship) violence, sexual violence, sexual exploitation, or stalking is encouraged to seek resources on campus or in the community. Please contact the Director of Title IX Compliance (Adrienne Allison – <a href="mailto:Adrienne.allison@unc.edu">Adrienne.allison@unc.edu</a> ), Report and Response Coordinators in the Equal Opportunity and Compliance Office ( <a href="mailto:reportandresponse@unc.edu">reportandresponse@unc.edu</a> ), Counseling and Psychological Services (confidential), or the Gender Violence Services Coordinators ( <a href="mailto:gvsc@unc.edu">gvsc@unc.edu</a> ; confidential) to discuss your specific needs. Additional resources are available at <a href="http://safe.unc.edu">safe.unc.edu</a> . |
| Honor Code Statement                  | Students are bound by the Honor Code in taking exams and in written work. The Honor Code of the University is in effect at all times, and the submission of work signifies understanding and acceptance of those requirements. Plagiarism will not be tolerated. Please consult with me if you have any questions about the Honor Code.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Legal                                 | Dr. Mario reserves the right to make changes to the syllabus, including all due dates. These changes will be announced as early as possible so that students can adjust their schedules.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |