### **SYLLABUS**

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# **SYLLABUS**

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### **COURSE OVERVIEW**

#### **INSTRUCTOR**

Mario Giacomazzo, mgiacoma@email.unc.edu

#### INSTRUCTIONAL ASSISTANTS

Sam Booth, slbooth@live.unc.edu

Joe Lavond, jlavond@email.unc.edu

### **COMMUNICATION**

We will use Piazza for class discussion. The system is catered towards getting you help fast and efficiently from classmates, instructional assistants, and myself. Rather than emailing content questions to the course staff, I encourage you to post your questions on Piazza. If you do need to get in touch with course staff, the best way is to email us directly. Since I tend to hundreds of students each semester, I ask you to first email your lab instructor. Then, after you have emailed your lab instructor, you

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#### **COURSE FORMAT**

The lectures will meet MWF 10:10am-11:00am in Hanes Hall Rm 120

The labs meeting times and locations are listed below. You must attend the lab section for which you are enrolled at the time that it is scheduled.

- Lab section 400: Tuesdays, 8:00am-8:50am, Hanes Hall Rm 107
- Lab section 402: Thursdays, 3:30pm-4:20pm, Hanes Hall Rm 130
- Lab section 403: Thursdays, 5:00pm-5:50pm, Hanes Hall Rm 130

#### **OFFICE HOURS**

All office hours will be conducted online via **Zoom** (<a href="https://unc.zoom.us/j/91225653535">https://unc.zoom.us/j/91225653535</a>). During the times listed below, the instructional assistants and myself will be available to answer any questions that you have about the course. There is no need to schedule an appointment, just drop in!

- Mario Giacomazzo: Tuesdays, 8:00am 2:00pm
- Joe Lavond: Wednesdays, 2:30pm -3:30pm
- Sam Booth: Mondays, 12:00pm 1:00pm

#### TARGET AUDIENCE

This course does not have any prerequisites beyond high-school algebra. The curriculum and format is designed specifically for students who have not previously taken statistics or computer science courses. If you have some prior experience in either statistics or computing you are welcome to enroll and will find much of interest due to the innovative nature of the course. If you have taken several statistics or computer science courses should instead take a more advanced course.

# REQUIRED MATERIALS

#### **TEXTBOOKS**

The following text is required and freely available online at: <a href="https://www.inferentialthinking.com">www.inferentialthinking.com</a>

Computational and Inferential Thinking: The Foundations of Data Science, by Ani Adhikari and John DeNero

#### **TECHNOLOGY**

JupyterLab is a web-based interactive development environment for Jupyter notebooks, code, and data...and free! We will use Jupyter to write code in Python for almost all class sessions and assignments. During the first week of class, there will be an synchronous lab 0 to walk you through the installation process.

<u>Gradescope</u> will be used to submit nearly all assignments for the course in the Jupyter Notebook format. This platform allows us to create a living rubric for speedy grading of large courses. You can login to Gradescope using your ONYEN.

## **ASSIGNMENTS AND EXAMS**

## LABS (11): 18% OF FINAL GRADE

During each lab session your Instructional Assistant will introduce and go over with you a lab or project. For these assignments you will determine testable hypotheses, clean, store, and organize data into useful formats for analysis, analyze those data, and communicate your findings. You will submit all lab assignments to Gradescope as Jupyter Notebooks with the ipynb file extension.

## LABS ATTENDANCE (11): 2% OF FINAL GRADE

Attendance will be taken during each lab session. To receive full credit for this attendance grade, you must miss no more than 2 lab sessions. If you miss more than 2 lab sessions, you will receive a 0 grade for attendance.

## LAB QUIZZES (11): 5% OF FINAL GRADE

Prior to each lab session there will be a brief multiple choice or short answer quiz that you will complete in Sakai. The quizzes are expected to take fewer than 10 minutes to complete, but will be open beginning 24 hours before your lab session, due at the beginning of your lab session, and have a time limit of 30 minutes. The quizzes are open book, notes, course materials, internet, and all things that are not direct communication with others. You will not need to use JupyterLab or run any code to complete the quizzes. These are meant to be straightforward applications of

the current course content and used as a check-in to make sure that you are keeping up with the material. When determining your final lab quiz grade, we will drop your **2** lowest quiz grades. Quizzes cannot be made up or taken at a different time (without a <u>University excused absence</u>).

## HOMEWORK (12): 25% OF FINAL GRADE

You will have a homework assignment due most weeks, which are meant to reinforce and extend the content that you will learn in the labs. You must submit each homework independently, but you are allowed to discuss problems with other students and course staff. You will submit all homework assignments to Gradescope as Jupyter Notebooks with the ipynb file extension.

# IN CLASS MIDTERM EXAMS (2): 10% OF FINAL GRADE

Midterm exams will consist of an in-class portion and a take home portion. Each inclass portion of the midterms will be worth 5% of your final grade. The format of the in-class portion of the midterms will resemble the lab quizzes. The in-class portion of midterm 1 will be during class on Friday, September 17th. The in-class portion of midterm 2 will be during class on Friday October 29th. Both portions of the midterms are open book, notes, course materials, internet, and all things that are not direct communication with others. You must be in the classroom to take each in-class portion of the midterms. Make-up exams are only possible for <u>University excused absences</u>. Unexcused exams will receive a score of 0. Unless you have accommodations as determined by the university or university excused absences, you must take the midterms at the dates and times provided here. If you have accommodations, please provide the formal notification before the end of the second week of classes.

### TAKE HOME MIDTERM EXAMS (2): 20% OF FINAL GRADE

Midterm exams will consist of an in-class portion and a take home portion. Each take-home portion will be worth 10% of your final grade. The format of the take-home portion will resemble the labs/homework. The take home portion of midterm 1 will be assigned immediately following class on Wednesday September 15th and due to Gradescope at the beginning of class on Friday September 17th. The take home portion of midterm 2 will be assigned immediately following class on Wednesday October 27th and due in class on Friday October 29th. Both portions of the midterms are open book, notes, course materials, internet, and all things that are not direct communication with others. Make-up exams are only possible for University excused

<u>absences</u>. Unexcused exams will receive a score of 0. Unless you have accommodations as determined by the university or university excused absences, you must take the midterms at the dates and times provided here. If you have accommodations, please provide the formal notification before the end of the second week of classes.

#### FINAL EXAM: 20% OF FINAL GRADE

The final exam is required for a passing grade, and will be held on Thursday, December 9th from 8:00am - 11:00am. You are expected to complete the final exam during the University Scheduled exam time. The final exam format will be similar to the take-home portions of the midterms, with the exception that the exam must be completed during the scheduled exam time and location. The final exam is open book, notes, course materials, internet, and all things that are not direct communication with others. Unless you have accommodations as determined by the university or university excused absences, you must take the final exam at the date and time provided here. If you have accommodations, please provide the formal notification before the end of the second week of classes.

#### LATE ASSIGNMENTS

Quizzes and exams **cannot** be taken or submitted late for credit without a <u>University</u> <u>excused absence</u>.

Homework and labs will be accepted up to 48 hours late. Assignments submitted fewer than 24 hours after the deadline will receive a maximum of **3/4 credit**. Those submitted between 24 and 48 hours after the deadline will receive a maximum of **1/2 credit**. No credit will be given for assignments submitted more than 48 hours after the deadline. Late assignments can still receive full credit with a <u>University</u> excused absence.

## **GRADING**

Percentages will be converted to letter grades according to the following scale.

| Letter Percentage Meaning Grade |  |
|---------------------------------|--|
|---------------------------------|--|

| А  | 93–100%   | Excellent: Far<br>exceeds<br>standard             |
|----|-----------|---|
| A- | 90-92.99% |   |
| B+ | 87-89.99% | Good: Exceeds<br>standard                         |
| В  | 83-86.99% |   |
| В- | 80-82.99% |   |
| C+ | 77-79.99% | Fair: Meets<br>standard                           |
| С  | 73-76.99% |   |
| C- | 70-72.99% |   |
| D+ | 67-69.99% | Poor: Shows<br>growth but falls<br>below standard |
| D  | 60-66.99% |   |
| F  | 0–59.99%  | Failing:<br>Deficient                             |

### **COURSE POLICIES**

### **MASK USE POLICY**

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 Office of Student Conduct. 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 Carolina Together.

### **LEARNING COOPERATIVELY**

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.



Academic Policies and Services