

Syllabus for STOR 305-001

Spreadsheet Models

Spring 2020

Instructor: Dr. Mario Giacomazzo **Office hours:** M 9:00AM – 10:00AM
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Office Hours: Th from 9:00AM – 11AM in Hanes B-4

Lectures: MWF from 10:10AM – 11:00AM in Hanes 120

Description: This course studies operations research decision-making techniques and data analysis using spreadsheets. The topics in the course will be divided into two broad types of problems: optimization and data analysis. Specific topics include:

Optimization:

- Break even analysis
- Linear programming {including sensitivity analysis}
- Integer programming
- Non-linear programming
- Goal programming

Data analysis:

- Descriptive statistics
- Visualizing data (scatterplots, trends, histograms, heat maps)
- Correlation functions
- Percentile functions
- Linear regression

Prerequisites: STOR 155 (Introductory Statistics) or equivalent.

Textbook: *Introduction to Management Science*. (13th Edition), Bernard Taylor, Pearson, 2018

Course URL: Website: https://supermariogiacomazzo.github.io/STOR305_WEBSITE/
Assignment Submission: <https://sakai.unc.edu/> and login with your Onyen

Software: A personal laptop with a working copy **Microsoft Excel** is required. You are required to bring your laptop to every class.

Final Grade: Attendance (5%)
Homework (15%)
Midterm 1 (25%)
Midterm 2 (25%)
Final (30%)

Attendance: Attendance is **mandatory**. Once per week at random, I will take attendance at the beginning of class in the form of an interactive game worth 0-7 points. If a guest speaker is scheduled, attendance will be taken and worth 7 points even if attendance has already been taken for that week. Only students in class will be eligible for the points. Any students who are absent will be penalized by receiving 0 points. At the end of the semester, the attendance grade will be curved so students who had perfect attendance get 100% on their attendance grade.

The only way to be excused from the point penalty for absence is by acquiring a university approved absence (<https://catalog.unc.edu/policies-procedures/attendance-grading-examination/>).

Homework: Due to the size of this class, we will follow rigid homework rules to make the graders' job manageable. Please note the following to ensure you get full credit:

Weekly homework will be posted on **Sakai** by **11:59PM** on **Friday**, and due at the beginning of class on the following **Friday**. Each assignment will be worth 20 points.

To receive full credit, you must clearly label each problem, neatly show all your work (including your mathematical arguments), and staple the pages of each assignment in the correct order. There will be an automatic **2 point** penalty for not stapling.

No late homework will be accepted. Do not send homework via email, only paper copies can be accepted. Automatic **5 point** penalty for turning in the homework more than 5 minutes after class starts on Friday. No homework will be accepted after class ends the day the assignment is due unless you have a university approved absence (<https://catalog.unc.edu/policies-procedures/attendance-grading-examination/>).

You are allowed (and encouraged) to work with other students but the homework you turn in should be in your own words. Copying homework from another student is forbidden. Any questions regarding a homework grade should first be addressed to the IA and if you still have questions then feel free to meet me. If you feel that some parts of a graded assignment should be regraded, please go to the IA within 2 weeks of getting back your assignment. Homework re-grades after this period will not be possible.

Exams: There will be two midterm exams, on the dates indicated below, and one final exam, on the date determined by the Registrar's Office.

Midterm 1 on February 21 at 10:10AM

Midterm 2 on April 8 at 10:10AM

Final Exam on April 27 at 8:00AM

Grade Scale: The below grading scale is guaranteed. The “+” and “-” designations will only be used in your favor. At the end of the semester, a comprehensive inspection of all the class grades will determine the cutoff points for “+” and “-” designations.

A [90,100] B [80,90) C [70,80) D [60,70) F [0,60)

More Help: Excel can be incredibly frustrating and take some time to get used to. Before you email your instructor or IA please spend some time trying to solve/Google the problem on your own. Then, proceed to find someone in the class to ask. It is highly possible someone else has experienced the same problem. Finally, if you have not solved the problem, email your instructor or IA.

Accessibility: 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 difficulties with accessing learning opportunities.

All accommodations are coordinated through the Accessibility Resources and Service Office. See the ARS Website for contact information: <https://ars.unc.edu> or email ars@unc.edu.

Honor Code: All students are expected 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. If you are unsure about which actions violate that honor code, please see me or consult honor.unc.edu.

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.

The University of North Carolina at Chapel Hill has had a student-administered honor system and judicial system for over 100 years. The system is the responsibility of students and is regulated and governed by them, but faculty share the responsibility. If you have questions about your responsibility under the honor code, please bring them to your instructor or consult with the office of the Dean of Students or the Instrument of Student Judicial Governance. This document, adopted by the Chancellor, the Faculty Council, and the Student Congress, contains all policies and procedures pertaining to the student honor system. Your full participation and observance of the honor code is expected (honor.unc.edu).

Title IX: Acts of discrimination, harassment, interpersonal (relationship) violence, sexual violence, sexual exploitation, stalking, and related retaliation are prohibited at UNC-Chapel Hill. If you have experienced these types of conduct, you are encouraged to report the incident and seek resources on campus or in the community.

Please contact the Director of Title IX Compliance/Title IX Coordinator (Adrienne Allison, adrienne.allison@unc.edu), Report and Response Coordinators (Ew Quimbaya-Winship, eqw@unc.edu; Rebecca Gibson, rmgibson@unc.edu; Kathryn

Winn, kmwinn@unc.edu), Counseling and Psychological Services (CAPs) (confidential) in Campus Health Services at (919) 966-3658, or the Gender Violence Services Coordinators (confidential) (Cassidy Johnson, cassidyjohnson@unc.edu; Holly Lovern, holly.lovern@unc.edu) to discuss your specific needs.

Additional resources are available at safe.unc.edu.

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.