Syllabus – Summer Session 2 of 2024 (Section 820, Class Number 1307)

Course and Instructor Information

Course Title	:	**Statistical Methods**
Credits	:	**3**
Instruction Mode	:	**Online Synchronous**
Prerequisites	:	**MATH 1132Q or 1152Q**
Instructor	:	**Dr. Suman Majumdar**, WebEx Personal Room, **(203)286-5631**
Teaching Assistant	:	**Ms. Manjun Yu**, WebEx Personal Room, **(517)249-1842**

Summer Session 2 starts on 07/08/2024 (which is a Monday) and officially ends on 08/09/2024 (which is a Friday). In each of these five weeks, the Lecture will meet from 9 AM to 11 AM, Monday through Thursday, in Dr. Majumdar's WebEx Room, and he will be in his WebEx Room on Friday from 9 AM to 11 AM to answer any questions you may have about what we covered in the Lecture. Additionally, starting on 07/08/2024 and ending on 08/11/24, we will hold an office hour from 7 PM to 8 PM. Some of these office hours will be facilitated by Ms. Yu in her WebEx room and we will let you know through HuskyCT where to go on a given day.

E-mail is the best way to reach Dr. Majumdar outside of the classroom. While Dr. Majumdar is able to respond to student e-mails promptly most of the time, **please note that in our discipline the exchange of e-mails is almost always a poor and inefficient method for answering content-related questions**. As such, please come to the office hours for such questions.

Course Materials

Course materials should be obtained before the first day of class or as soon as possible thereafter.

The Textbook
Probability and Statistics for Engineering and the Sciences **(9th Edition) by Jay L. Devore.**
Published by Cengage Learning, ISBN 978-1-305-251809.
The textbook is available at the UConn Bookstore. You may be able to rent the book from Cengage.

Hardware
A fully functional computer running on the Windows or the Mac OS is **required** (see the Device Requirements for Students). Using a computer running on the Linux or the Android OS to complete the coursework is **strongly discouraged**. A Scientific / Graphing Calculator is **required**.

For this Online Synchronous course, you should be using a computer that is equipped with a microphone, a pair of headphones, and a webcam. Almost any laptop these days has a microphone and a webcam built into it and you most likely have a pair of headphones that you use with your phone. However, if you are going to use a desktop computer, you should purchase an external webcam, which typically comes with a microphone built into it. **Please note that due to concerns surrounding student authentication in courses that do not meet in a brick-and-mortar classroom, we will expect you to turn on your webcam during lectures and office hours**. We understand that you may be forced to turn off your webcam from time to time because of lack of bandwidth (that can happen to us as well) and there will be occasions when you will not want to turn on your webcam because of what is happening in your surroundings, but turning on your webcam should be the norm rather than the exception. Also, online synchronous interaction results in a better learning outcome if we all have our webcams turned on.

Software
Click here to download the plug-in Acrobat Reader to your computer. Your computer should be able to play this video. If you are using a Mac, the video may not play if the link opens in Safari. In that case, open Chrome or Firefox on your Mac and copy the link from the address bar in Safari to the address bar in your alternative browser. Please let me know if you cannot play the video on your computer. For a seamless WebEx experience, download the WebEx Desktop App. Set yourself up to use the statistical software **Minitab.**

From the UConn Catalog:

Basic probability distributions, point and interval estimation, tests of hypotheses, correlation and regression, analysis of variance, experimental design, non-parametric procedures.

Truth be told, we will only cover (see the tentative schedule below) the first three topics listed above, developing the course around Chapters 1-4 and 6-9 of the Textbook. Since multivariable calculus is not a prerequisite for this course, we will not cover Chapter 5, but will call on some results from that chapter while covering Chapters 6-9.

Date	Topic
07/08/24	Chapter 1
07/09/24	Chapter 2
07/10/24	Chapter 2
07/11/24	Chapter 2
07/15/24	Chapter 3
07/16/24	Chapter 3
07/17/24	Chapter 3
07/18/24	Chapter 4
07/22/24	Chapter 4
07/23/24	Chapter 4
07/24/24	Overview of Chapter 5
07/25/24	Chapter 6
07/29/24	Chapter 6/7
07/30/24	Chapter 7
07/31/24	Chapter 7
08/01/24	Chapter 8
08/05/24	Chapter 8
08/06/24	Chapter 8/9
08/07/24	Chapter 9
08/08/24	Chapter 9

By the end of the course, you should be able to:

1. Read graphs, charts, and tables for classifying, summarizing, and visualizing data.

2. Calculate and interpret descriptive statistical measures, including, but not limited to, mean, median, mode, standard deviation, range, percentile, interquartile range, and standardized score.

3. Solve probability problems and use random variables for modeling population features.

4. Do calculations involved in the use of inferential statistics, including point and interval estimation and hypothesis testing, and interpret the results of these calculations.

5. Appreciate the use of simple mathematical and computational tools for refining existing statistical concepts and methods.

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Homework assignments

We will assign 15 sets of homework problems through HuskyCT according to the schedule below.

Assignment Number	Becomes Available	Due By	Assignment Number	Becomes Available	Due By
1	1:00 PM, 07/08/24	11:59 PM, 07/10/24	2	1:00 PM, 07/09/24	11:59 PM, 07/11/24
3	1:00 PM, 07/10/24	11:59 PM, 07/12/24	4	1:00 PM, 07/15/24	11:59 PM, 07/17/24
5	1:00 PM, 07/16/24	11:59 PM, 07/18/24	6	1:00 PM, 07/17/24	11:59 PM, 07/19/24
7	1:00 PM, 07/22/24	11:59 PM, 07/24/24	8	1:00 PM, 07/23/24	11:59 PM, 07/25/24
9	1:00 PM, 07/24/24	11:59 PM, 07/26/24	10	1:00 PM, 07/29/24	11:59 PM, 07/31/24
11	1:00 PM, 07/30/24	11:59 PM, 08/01/24	12	1:00 PM, 07/31/24	11:59 PM, 08/02/24
13	1:00 PM, 08/05/24	11:59 PM, 08/07/24	14	1:00 PM, 08/06/24	11:59 PM, 08/08/24
15	1:00 PM, 08/07/24	11:59 PM, 08/09/24			

Each assignment will be worth 30 points. No late submission of an assignment will be accepted.

Exams

We will give you 4 take-home midterm exams through HuskyCT according to the schedule below.

Midterm Number	Becomes Available	Due By	Midterm Number	Becomes Available	Due By
1	1:00 PM, 07/11/24	11:59 PM, 07/14/24	2	1:00 PM, 07/18/24	11:59 PM, 07/21/24
3	1:00 PM, 07/25/24	11:59 PM, 07/28/24	4	1:00 PM, 08/01/24	11:59 PM, 08/04/24

Each midterm exam will be worth 100 points. No late submission of a midterm exam will be accepted.

We will give you a comprehensive take-home final exam, consisting of 10 questions, through HuskyCT according to the schedule below.

Question Number	Becomes Available	Due By	Question Number	Becomes Available	Due By
1	1:00 PM, 08/08/24	11:59 PM, 08/10/24	2	1:00 PM, 08/08/24	11:59 PM, 08/10/24
3	1:00 PM, 08/08/24	11:59 PM, 08/10/24	4	1:00 PM, 08/08/24	11:59 PM, 08/10/24
5	1:00 PM, 08/08/24	11:59 PM, 08/10/24	6	1:00 PM, 08/08/24	11:59 PM, 08/11/24
7	1:00 PM, 08/08/24	11:59 PM, 08/11/24	8	1:00 PM, 08/08/24	11:59 PM, 08/11/24
9	1:00 PM, 08/08/24	11:59 PM, 08/11/24	10	1:00 PM, 08/08/24	11:59 PM, 08/11/24

The final exam will be worth 400 points. No late submission of a question on the final exam will be accepted.

You can use any inanimate resource you want while completing these assignments and exams. There will be no make-up for any assessment you miss.

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We will drop the 5 lowest assignment scores and add the remaining 10 assignment scores to calculate your total assignment score SCORE_A (out of 300). We will drop the lowest midterm exam score and add the remaining 3 midterm exam scores to calculate your total midterm exam score SCORE_M (out of 300). We will add your final exam score SCORE_F (out of 400) to the sum of SCORE_A and SCORE_M to calculate your SCORE_1 (out of 1,000). We will then multiply SCORE_F by 2.5 to calculate your SCORE_2 (again, out of 1,000). Your SCORE, which is the maximum of SCORE_1 and SCORE_2, will be used, in conjunction with the table below, to determine your Letter Grade.

SCORE	Letter Grade	GPA
920-1000	A	4.0
870-919	A-	3.7
820-869	B+	3.3
770-819	B	3.0
720-769	B-	2.7
670-719	C+	2.3
620-669	C	2.0
570-619	C-	1.7
520-569	D+	1.3
470-519	D	1.0
420-469	D-	0.7
<420	F	0.0

At the end of the semester, we **may** decide to adjust the Grading Scale above, but only to your advantage. In other words, **we will never raise any of the cut-off points in the above table**.

Feedback

We will make every effort to provide feedback and grades as soon as possible and keep you informed in case of unusual delays. You can use this Excel spreadsheet to keep track of your progress.

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As a member of the University of Connecticut student community, you are held to certain standards and required to abide by the academic policies of the University. Also, there are numerous resources available to help you succeed in your academic work. This section provides a brief overview of important standards, policies, and resources.

Student Code

You are responsible for acting in accordance with the University of Connecticut's Student Code. Review and become familiar with the provisions of the code. In particular, make sure you have read the section that applies to you on Academic Integrity:

- Academic Integrity in Undergraduate Education and Research
- Scholarly Integrity in Graduate Education and Research

Cheating and plagiarism are taken very seriously at the University of Connecticut. As a student, it is your responsibility to avoid plagiarism. If you need more information about the subject of plagiarism, use the following resources:

- Plagiarism: How to Recognize it and How to Avoid It
- University of Connecticut Libraries' Student Instruction (includes research, citing and writing resources)

Copyright

Materials within the course are only for the use of students enrolled in the course for purposes associated with the course and may not be retained or further disseminated.

Adding or Dropping a Course

If you should decide to add or drop a course, there are official procedures to follow:

- Matriculated students should add or drop a course through the Student Administration System.
- Non-degree students should refer to Non-Degree Add/Drop Information located on the registrar's website.

You must officially drop a course to avoid receiving an "F" on your permanent transcript. Simply discontinuing class or informing us that you want to drop does not constitute an official drop of the course. For more information, refer to the:

- Undergraduate Catalog
- Graduate Catalog

Academic Calendar

Please be aware of the important dates and deadlines for the Summer Session of 2024.

Students with Disabilities

Students needing special accommodations should contact the University's Center for Students with Disabilities (CSD) as soon as possible, preferably right after enrolling in the course. You may contact CSD by calling (860) 486-2020 or by emailing. If your request for accommodation is approved, CSD will send an accommodation letter directly to us so that special arrangements can be made. Student requests for accommodation must be filed each semester.

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Policy against Discrimination, Harassment and Inappropriate Romantic Relationships

The University is committed to maintaining an environment free of discrimination or discriminatory harassment directed toward any person or group within its community – students, employees, or visitors. Academic and professional excellence can flourish only when each member of our community is assured an atmosphere of mutual respect. All members of the University community are responsible for the maintenance of an academic and work environment in which people are free to learn and work without fear of discrimination or discriminatory harassment. In addition, inappropriate romantic relationships can undermine the University's mission when those in positions of authority abuse or appear to abuse their authority. To that end, and in accordance with federal and state law, the University prohibits discrimination and discriminatory harassment, as well as inappropriate romantic relationships, and such behavior will be met with appropriate disciplinary action, up to and including dismissal from the University. Refer to the Policy against Discrimination, Harassment, and Related Interpersonal Violence for more information.

Sexual Assault Reporting Policy

To protect the campus community, all non-confidential University employees (including faculty) are required to report assaults they witness or are told about to the Office of Institutional Equity under the Policy against Discrimination, Harassment, and Related Interpersonal Violence. The University takes all reports with the utmost seriousness. Please be aware that while the information you provide will remain private, it will not be confidential and will be shared with university officials who can help. Refer to the Policy against Discrimination, Harassment, and Related Interpersonal Violence for more information.

Evaluation of the Course

You will be provided an opportunity to evaluate instruction in this course using the University's standard procedures, which are administered by the Office of Institutional Research and Effectiveness.

Additional informal formative surveys may also be administered within the course as an optional evaluation tool.

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