UCONN
UNIVERSITY OF CONNECTICUT

STAT 1100Q
Elementary Concepts of Statistics

Syllabus – Summer 2018 (Section Z80, Class Number 1647)
(07/09/2018 – 08/17/2018)

This course is developed by Dr. Suman Majumdar, Associate Professor of Statistics at the University of Connecticut, and is facilitated completely online using HuskyCT, UConn's learning management system powered by Blackboard Learn. Any content not created by the developer is used with permission of the copyright holder.

For HuskyCT technical support, during regular business hours contact HuskyTech. You also have 24x7 Course Support including access to live chat, phone, and support documents.

Excluding materials for purchase, syllabus information is subject to change.

The most up-to-date syllabus is located within the course in HuskyCT.

Course and Instructor Information

Course Title: Elementary Concepts of Statistics
Credits: 4
Format: Online
Recommended Preparation: MATH 1011 (Introductory College Algebra and Mathematical Modeling)
Instructor: Dr. Suman Majumdar, suman.majumdar@uconn.edu, WebEx Personal Room, (203)286-5631

Office Hours/Availability: E-mail is the best way to reach me. You can expect a response in less than 24 hours. If your query is time sensitive, please don't hesitate to call me. If you leave me a voicemail, I'll get back to you as soon as possible.

I'll be holding virtual office hours regularly using the WebEx platform. Details will be posted on HuskyCT.

Minimum Technical Skills

To be successful in this course, you will need the following technical skills:

- Use electronic mail with attachments.
- Be familiar with Microsoft WORD and EXCEL.
- Copy and paste text, graphics or hyperlinks.
- Work within two or more browser windows simultaneously.
- Open and access PDF files.

University students are expected to demonstrate competency in Computer Technology. Explore the Computer Technology Competencies page for more information.

Course Materials

Required course materials should be obtained before the first day of class.

Texts are available through a local or online bookstore. The UConn Bookstore carries the required textbooks (you have to search for this course under the Stamford campus), **but you do not need the supplement for our course**. For more information, see Textbooks and Materials on the Enrolled Students page.

Required Materials:

1. ***Mind on Statistics*, 5th Edition**, by **Jessica M. Utts** and **Robert F. Heckard**
   Published by Brooks / Cole, Cengage Learning
   ISBN – 13: 978-1-285-463186 (for the hardcover 5th Edition)
   978-1-305-762312 (for the UConn Custom Edition)
   The UConn Bookstore only carries the UConn Custom Edition. The hardcover 5th Edition may be available at a cheaper price online.

2. ***An Introduction to Data Analysis using Minitab 17*, 5th Edition**, by **Kathleen M. McLaughlin** and **Dorothy B. Wakefield**
   Published by Pearson / Prentice Hall
   ISBN – 13: 978-1-323-013632

3. **A Scientific / Graphing Calculator**

4. **Software**

   If you are a Windows PC user (7, 8, or 10), download Microsoft Office and **Minitab 18**.

   If you are a Mac user and have access to a Windows PC, I strongly recommend that you download Microsoft Office and **Minitab 18** on that Windows PC, and complete all the course assessments on that Windows PC. You can use your Mac to read the notes, view the lectures, and participate in WebEx office hours (using Chrome, not Safari) without any glitch.

   If you are a Mac user and do not have access to a Windows PC, you should continue to use your Mac to read the notes, view the lectures, and participate in WebEx office hours (using Chrome, not Safari). However, for the course assessments, you should use the SKYBOX by UCONN. When logging into SKYBOX, make sure you select UCONN from the drop-down menu (instead of LIBRARY). If the SKYBOX link does not work, connect to the UCONN VPN and try again. If you run into any problem with the SKYBOX, please report it to helpcenter@uconn.edu or call (860)486-4357 during normal business hours.

   Click here to download the required 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 on your Mac and copy the link from the address bar in Safari to the address bar in Chrome. If you cannot play the video on your computer, please fill out this form.

5. **A microphone and a webcam for participating in virtual office hours.**

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Course Description

From the UConn Catalog:

Standard and nonparametric approaches to statistical analysis; exploratory data analysis, elementary probability, sampling distributions, estimation and hypothesis testing, one- and two-sample procedures, regression and correlation. Learning to do statistical analysis on a personal computer is an integral part of the course.

The course is developed around Chapters 1-3 and 7-13 of the Textbook, ***Mind on Statistics***. Please note that these 10 chapters span 411 pages and it is impossible to cover these pages verbatim in one semester. That, and other pedagogical considerations, cause me to substantially reorganize the content into the 9 modules broadly described below. It is important for you to note how each module relates to Chapters in the Textbook and the Workbook, ***An Introduction to Data Analysis using Minitab 17***.

Module #	Module Description	Textbook Chapters	Workbook Chapters
1	Introduction and Fundamental Principles	1	N/A
2	Probability – Definitions, Calculations, and Applications	7	N/A
3	Descriptive Statistical Measures (includes Correlation and Regression)	2 and 3	1-3 and 11
4	Random Variables and Probability Distributions	8	5 and 6
5	Sampling Distributions	9	7
6	Methods and Principles of Inference	N/A	N/A
7	Normality Assessment	N/A	N/A
8	Inference on Qualitative Variables	10 and 12	8-9
9	Inference on Quantitative Variables	11 and 13	8-10

Course Objectives

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

1. Create and read graphs, charts, and tables for classifying, summarizing, and visualizing data.
2. Calculate and interpret descriptive statistical measures including, but not related to: mean, median, mode, standard deviation, range, percentile, interquartile range, and standardized score.
3. Examine relationships between variables to extract usable information.
4. Solve elementary probability problems and use random variables for modeling population features.
5. Do calculations involved in the use of inferential statistics, including point and interval estimation and hypothesis testing, and interpret the results of these calculations.

Course Schedule

Click here to access the **Course Schedule**.

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Computer Assignments

There will be 6 computer assignments, for a total of 120 points. Collaboration among students on these assignments is *strictly* prohibited. Please review the Assignment Details document for more information.

Every assignment will have a deadline, followed initially by an extended deadline (when it becomes unavailable) and subsequently by an über extended deadline (coinciding with the release of the solution to the assignment).

Please note that an assignment submitted after its deadline is considered late and may not be graded for full credit; *no matter what*, a submission of an assignment will not be accepted once its solution is released.

The Course Menu on the left side of the Home Page contains the link to a folder titled Assignments. Every assignment and its solution will be placed inside that folder. Click on the link for an assignment (*different from the* link for an assignment file) to access and submit it. You can attach the file you intend to submit as your assignment in that page.

Problem Sets

There will be 6 problem sets on HuskyCT, one for each Learning Module sans 1, 6, and 7, for a total of 84 points. Please review the Problem Set Details document for more information.

You will have two attempts at every problem set and the higher of the two scores will count towards your grade. Every problem set must be submitted by its deadline.

The Course Menu on the left side of the Home Page contains the link to a folder titled **Problem Sets**. Every problem set and its solution will be placed inside that folder. Make it a habit to read the description of a problem set carefully before clicking on its link to access it.

By completing these problem sets, you agree to abide by the **Honor Code**: You will not seek help from anyone to complete the problem sets. Note that you are allowed to use any inanimate resource, including your calculator and Minitab, while completing the problem sets.

Timed Quizzes

You will be quizzed on the material of each ***Learning Module* except 7**, for a total of **80 points**. Please note that your total score on these quizzes is by far the largest component of what determines your course grade.

I will give you two quizzes on each module, generally one after the other. Each of the two quizzes on a particular module will have the same number of questions and you will get the same amount of time to complete each of the two quizzes. The level of difficulty of the questions on the second quiz will be comparable to that of the questions on the first quiz, but you should not expect that any question would be repeated. I will post detailed solutions to each of the two quizzes. While you are very likely to review the solution to the first quiz carefully as you prepare for the second one, I will encourage you to review the solution to the second quiz as well to improve your understanding of the material. Your quiz score for a module will be the higher of the two scores (on the two quizzes on that module). See the Quiz Details document for more information.

The Course Menu on the left side of the Home Page contains the link to a folder titled **Quizzes**. Every quiz and its solution will be placed inside that folder. Make it a habit to read the description of a quiz carefully before clicking on its link to access it.

By taking these quizzes, you agree to abide by the **Honor Code**: You will not seek help from anyone to complete the quizzes. Note that you are allowed to use any inanimate resource, including your calculator and Minitab, while completing the quizzes.

Course Grading

Summary of Course Grading

Course Components	Weight (scaling factor)
Computer Assignments	20% (6)
Homework Problem Sets	6% (14)
Timed Quizzes	80% (1)
Total	**106%***

*** The 106% above does not result from a numerical or a typographical error. It reflects a 6-point extra-credit opportunity offered to the entire class. There will be no individualized extra credit opportunity.**

Grading Scale: (If your weighted course grade is a fraction, round it up to the next whole number.)

Grade	Letter Grade	GPA
> 92	A	4.0
87-92	A-	3.7
81-86	B+	3.3
73-80	B	3.0
67-72	B-	2.7
62-66	C+	2.3
57-61	C	2.0
52-56	C-	1.7
48-51	D+	1.3
44-47	D	1.0
40-43	D-	0.7
<40	F	0.0

Due Dates and Late Policy

All course due dates are specified in the Course Schedule. Deadlines are based on Eastern Daylight Saving Time; if you are in a different time zone, please adjust your submittal times accordingly. *I reserve the right to change the various dates as the semester progresses.* Please pay attention to HuskyCT Announcements.

Feedback

I will make every effort to provide feedback and grades as soon as possible and keep you informed in case of unusual delays. To keep track of your performance in the course, use this Excel Template.

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Student Responsibilities and Resources

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
- Academic 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.

Netiquette and Communication

At all times, course communication with fellow students and the instructor are to be professional and courteous. It is expected that you proofread all your written communication, including discussion posts, assignment submissions, and mail messages. If you are new to online learning or need a netiquette refresher, please look at The Core Rules of Netiquette.

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 the instructor 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

There are important dates and deadlines for each semester and session classes are offered:

- Fall and Spring Semester
- Summer Session
- Winter Session

Academic Support Resources

Technology and Academic Help provides a guide to technical and academic assistance.

Students with Disabilities

Students needing special accommodations should work with the University's Center for Students with Disabilities (CSD). 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 me so that special arrangements can be made. (Note: Student requests for accommodation must be filed each semester.)

Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued by the United States federal government. (Retrieved March 24, 2013 from Blackboard's website)

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.

Course Policy on Technology Related Issues

While I will diligently work with you to resolve any technology related issues you may encounter, you are ultimately responsible for ensuring that your computer and internet connection are equipped to handle the demands of the course; in particular, **I cannot let you make-up an assessment because of a technology related issue at your end**. Since I am not a specialist in information technology, for many of your issues my role will be confined to putting you in touch with appropriate support personnel within the University. Since I have no control over how quickly your issue will be addressed, please bring your concerns to my attention as soon as they surface.

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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