Department of Mathematical Science

MA 3710 Section R04 Engineering Statistics Fall 2020

Instructor: Md Mutasim Billah
Office: Online via Zoom
Online Office Hours: MWF 04:50 pm-05:50 pm or by appointment
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Text: *Statistical Methods for Engineers* (any edition is fine)
by Vining and Kowalski

Grading:

Topic	Notes	Weight
Midterm Exam 1	Friday, October 02 in class	25%
Midterm Exam 2	Wednesday, November 04 in class	25%
Comprehensive Final Exam	Date to be announced	20%
Homework	Total of 9 assignments	30%
Research Project	Total of 2 projects	N/A

Grading Scale:

90% - 100%	A
85% - 90%	AB
80% - 85%	B
75% - 80%	BC
70% - 75%	C
65% - 70%	CD
60% - 65%	D
0% - 60%	F

We will cover these sections of the textbook in the following order:

Exam 1: All of Chapter 1, All of Chapter 2, 3.1, 3.2, 3.3, 3.4
Exam 2: 3.5, 3.6, 3.7, 4.1, 4.2, 4.3, 4.4, 4.8
The Final Exam will cover the previously listed sections in addition to: 5.1, 5.2, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 6.1, 6.2, 6.4, & one-way ANOVA

Required Technology:

Students enrolled in this *remote course* must have:

- **(a)** A functional computer/laptop with a current Windows or Mac operating system.
- **(b)** A good home internet connection.
- **(c)** A smartphone with the ability to load apps from a major app store (suggested apps are Zoom, GeniusScan, and Canvas).
- **(d)** Access to a webcam and printer.

Rules of Conduct:

The following rules of conduct will be enforced to maintain a respectful, cooperative, and businesslike atmosphere in the Zoom class session:

- **(a)** Attend the zoom class session regularly (at least 5 minutes before the class).
- **(b)** As this is a remote class, all students are ***encouraged*** to turn on the video of their webcam while in a *zoom class session* to promote more involvement, cooperation, and participation during the class period; use of virtual background is totally fine.

Handouts:

In this course, there are handouts for most of the chapters. Handouts are available in the modules and will be unlocked every week. YOU ARE REQUIRED TO PRINT AND HAVE THE HANDOUTS IN THE ZOOM CLASS SESSION. You can also download the handouts from the 'Handouts' section inside MA 3710 folder. These handouts will consist of the examples that we are going to solve after discussing and writing down the rules and theories behind them.

P.S. For this remote course, I have posted all the handouts at once at the end of the *week 00 module* so that you can print them all together, given that you do not have a printer at home (meaning that you cannot print things every week).

Homework:

Homework assignments are available on Canvas. I will regularly announce the exact due date of the next HW in the zoom live class session. Besides, you also can check the due date of the HW in canvas (in the Module/Assignment link). I will not be providing answer keys to the assignments, but you are welcome to discuss the HW questions during the online office hours or via appointment. You can also discuss the HW problems with your classmates, however, "*copying classmate's answer*" is strictly prohibited. Please see the *cheating or plagiarism* section of the syllabus for details.
Homework must be submitted in canvas on time; 50% of the total earned points will be subtracted if the HW is not submitted before the due date; however, if a student is sick or has some other serious issues; no points will be subtracted for the late submission of the HW, given that I have been notified in advance. A neatness bonus or messiness penalty may be added or subtracted to the total points earned on the assignments. Work that I consider too messy to grade will receive a zero. When answering a question,

clearly indicate where your answer starts and ends. Points will be subtracted from homework assignments that do not adhere to the following guidelines:

(a) Circle your answer so it can easily be found on the page.
(b) Do not place questions side by side on a sheet of paper.
(c) Do the questions in order. Problem 1 should be before Problem 2, etc.
(d) Work should be done for all nontrivial calculations.
(e) Merge the pages with your name written at the top and then submit the pdf on Canvas. Also, write your name in the pdf file before submitting it on canvas.

Midterm Exams & Comprehensive Final Exam:

The two midterm exams and one comprehensive final exam will be a combination of multiple-choice, fill-in-the-blanks, and partial credit questions. Although the Final Exam is comprehensive, about half of it will cover material beyond Exam 2. The followings are the rules for the exam; make sure that you have understood each step:

(a) Resources allowed -- Followings are the rules about the materials & technologies you may use during the exam:

1. You may use your notes, formula sheet, tables, and calculator during the exam. However, please note that the exam time will be limited, and you need to be an expert in the class materials to complete the exam on time.
2. Typing in the laptop/phone during the exam is strictly prohibited. The only device where you can type is in your calculator!

(b) Boarding-on -- Please follow the steps given below to start the exam:

1. You are required to turn on the video in zoom *using webcam* during the exam time.
2. The boarding process will be started *10 minutes before the exam*.
3. An invitation will be sent to you for joining the breakdown room in Zoom; you can be able to start the exam there.
4. Log in to canvas from your laptop/computer; go to the modules and scroll down to find:
    1. Exam 01 in Week 04 & 05 module
    2. Exam 02 in Week 10 module
    3. Final Exam in Week 14 module
5. After finding the Exam in the module, click there, download the question, go through the questions using the laptop/computer screen (you don't need to download the question), and start writing the answer on the paper.
6. If you have any questions during the exam time, you can come back to the main room of Zoom and ask me; I will send you to another breakdown room after that. Follow the same process if you have disconnected from the zoom for the net problem.

(c) Boarding-off -- Please follow the procedures below to submit your exam papers:

1. After finishing the exam, you are required to come back to the main room of zoom.
2. Start scanning the answer papers using your smartphone in front of the webcam and submit to the canvas. You may use apps like GeniusScan to scan and convert your answer papers to pdf.

3. After the submission, I will check your papers, & you will be all done with the exam after that.

- ***Demo Exam:*** A *demo exam* will be taken before the *real exam* so that you feel comfortable with the process on the exam day.

Research Projects:

There will be two research projects and you are required to use R-studio for the projects. The projects are optional; however, I will offer bonus points if you conduct the project and those points will be added to your exam scores. Follow the instructions of module week 00 to download and install R-studio on your laptop/computer.

Cheating or Plagiarism:

Proper professional and ethical behavior is expected of all students in this class. ***This is taken very seriously***. If cheating/plagiarism is suspected, a score of zero will be given for the HW/exam/course. At the discretion of the instructor, the Dean of Students will be notified.

MTU complies with all federal and state laws and regulations regarding discrimination, including the Americans with Disability Act of 1990 (ADA). If you have a disability and need a reasonable accommodation for equal access to education or services at MTU, please call the Associate Dean of Students (487-2212). For other concerns about discrimination, you may contact your advisor or the Affirmative Action Office (487-3310).

Good Luck!