Michigan Technological University

1885

Department of Mathematical Science

MA 3710 Section R02 Engineering Statistics Spring 2025

Instructor: Md Mutasim Billah
Office: Fisher 223A
Office Hours: MW 1:00 pm-2:00 pm or by appointment (via Zoom) 24/7
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Text: *Statistical Methods for Engineers* (any edition is fine)
by Vining and Kowalski (e-book on Canvas)

Grading:

Topic	Notes	Weight
Midterm Exam 1	Monday, February 10 in class	20%
Midterm Exam 2	Wednesday, March 19 in class	20%
Comprehensive Final Exam	Date to be announced	25%
Homework	Total of 9 assignments	30%
Class Participation	In-class activities & HW Discussion Page on Canvas	5%

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

Rounding Policy: Grades will be rounded <u>up</u> if they reach the <u>0.50</u> threshold. For example:
(a) A grade of 89.50% or higher will be rounded up to 90% (A)
(b) A grade of 89.49% or lower will remain as 89% (AB)

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

Rules of Conduct:
The following rules of conduct will be enforced to maintain a respectful and businesslike atmosphere in the classroom:
(a) Arrive on time
(b) Cell phone and laptop usage prohibited during class unless documented usage approved

Handouts and Practice Problems:
In this course, handouts are available for most chapters. I will regularly email the handout for the specific chapter. Alternatively, you can download them from the 'Handouts' section under 'Files' on Canvas. These handouts include examples we will solve together after discussing and writing down the related rules and theories. ***YOU ARE REQUIRED TO PRINT AND BRING THE HANDOUTS IN THE CLASS.***

Practice problems are posted on Canvas under 'Files.' These are crucial resources aligned with the course materials and solving them before attempting the homework is highly recommended. Practice exams will be unlocked prior to the actual exams.

Midterm Exams:
The two midterm exams will be a combination of multiple-choice, T/F, and partial credit questions. The exams will be closed book and closed notes, but you will be permitted to use a calculator and make your own formula sheet. Your formula sheet will be an 8.5" x 11" piece of paper with anything you want (formulas, definitions, examples, etc.) written on ONE side. Any tables needed to do problems will be provided. Missed exams cannot be retaken unless an exception is granted with notification from the dean of the school or **excused absence** (see below).

Comprehensive Final Exam:
You will be permitted to use a calculator and three formula sheets. You might want to use the same formula sheets you made for Exam 1 and Exam 2 and a third formula sheet for the material after Exam 2. Your formula sheets will be 8.5" x 11" pieces of paper with anything you want written on ONE side. Although the Final Exam is comprehensive, about half of it will cover material beyond Exam 2.

Homework:
Homework assignments are available on Canvas and are due at 11:59 PM. You <u>must</u> submit your answers directly on Canvas. I will regularly announce the exact due date of the next assignment in class. Besides, you can also check the due date of the HW on Canvas (in the '<u>Assignments'</u> link). You can discuss the homework problems with your classmates (<u>ONLY </u>through the <u>HW Discussion Page);</u> however, "copying a classmate's answer" and "discussing HW problems anywhere except the HW Discussion Page" are strictly prohibited. Please see the <u>cheating or plagiarism</u> section of the syllabus for details. Homework must be submitted on Canvas on time; 20% of points will be subtracted for the late submission, exception might be considered if notified by the dean of school or **excused absences**.

Excused Absence
An excused absence is one in which a student is absent due to a University Sponsored Events (see below) or involves a legitimate extenuating circumstance (see below) which causes the student to miss class, miss a major assignment, or examination.

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University Sponsored Events

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- Including intercollegiate athletics
- Fine Arts Performances
- Academic program-sponsored competitions and field trips
- Official events where students represent the University in an official capacity

The instructor or staff supervising students participating in these events must provide notice to the students' instructors and the Dean of Students Office prior to the date of the activity. The notice must include the name of the activity, the date(s) of class absence, the name of the supervising instructor or staff, and the names of all participating students.

Absences involving Extenuating Circumstances
- Documented illness or injury
- Mental health hospitalizations
- Serious accidents
- Death of close loved one
- Student impacted by natural disaster
- Military duty
- Jury duty or subpoena for court appearances

Instructors retain the discretion to excuse student absences for reasons other than those described in the above paragraphs. Students are responsible for notifying their instructors prior to missing a class and arranging a mutually acceptable make-up procedure. In emergency situations, where students are unable to notify their instructors, students should promptly contact the Dean of Students Office for assistance.

Students with an excused absence shall be allowed to earn full credit for missing assignments by performing equivalent work, as long as the instructor deems that the learning objectives of the course can still be met.

All absences that are not documented as excused absences are considered **unexcused absences**. Instructors retain the discretion to excuse student absences for reasons other than those described above.

HW Discussion Page:

To ensure that everyone has the opportunity to earn full points on the homework, you can discuss homework problems through the HW Discussion Pages on Canvas, which are due at the same time as the corresponding homework. Subscribe to the HW Discussion page by clicking 'Discussion' on the left side of Canvas, locating the specific HW Discussion page, and hitting the 'subscribe' button on the right (the icon turns green when subscribed). This ensures you receive notifications whenever someone posts on the page. If you have any questions related to the homework, please first post your question in the discussion group. You can:

(a) Ask a question about a specific part of a problem,
(b) Respond to a question that has already been asked,
(c) Post what you believe is a solution to a part of a problem, or
(d) Comment on the completeness and/or correctness of someone else's solution.

Please note that this is a student discussion page, and it is unlikely that I will answer questions or correct errors in this discussion. You must collaborate to ensure all questions are answered and any incorrect or incomplete answers are addressed. If any student is still unable to get an answer by the morning of the homework due date, please feel free to contact me directly.

If you have a question regarding the course materials, please use e-mail/meet in the office hour; I am 24/7 available to answer your questions and jump into Zoom if outside of the office hour.

Submission Guidelines and Penalty Policy:

A messiness penalty will be applied to the total points earned on HW assignments/exams. Work that I consider too messy to grade will receive a zero. Moreover, points will be subtracted from the homework assignment and the exams that do not adhere to the following guidelines:

(a) Circle your answer so it can easily be found on the page. (-1 point/problem)
(b) Do the questions in order. Problem 1 should be before Problem 2, etc. (-1 point/problem)

(c) Work <u>must</u> be shown for all nontrivial calculations. (-1 point/problem)

(d) <u>DO NOT</u> write down the answers in the HW question papers: USE blank papers or open new page on the writing device to write down your answers. (-2 points)

(e) <u>Merge</u> the pages with your name written at the top and then submit it in the HW assignment section on the canvas in firstname_lastname_HW#.pdf format. (-2 points)

Class Participation:

Class participation points will be distributed based on the participation in the '<u>Discussion for HW</u>' page. Everyone who contributes to the discussion for HW page will get 2 points for making any worthwhile reply, 1 point if every question has an answer, and 1 point if every proposed incorrect (incomplete) answer is corrected.

Cheating or Plagiarism:

Proper professional and ethical behavior is expected of all students in this class. ***This is taken very seriously***. ***Possible cheatings*** include (but are not limited to):

(1) Communicating with other students, providing or receiving assistance, or using any resource other than the calculator and formula sheet during exams;

(2) Discussing homework problems with classmates on platforms other than the **HW Discussion Page** on Canvas or copying a classmate's answers for the homework;

(3) Collecting and using past semester's resources of HW/Exam to answer HW/Exam in the current semester.

If cheating is suspected, then the instructor will send an email giving a chance to the student to prove themself as innocent. If the student fails to show any plausible explanation or to reply to the email in 3 days, then a score of zero will be given for the hw/exam/course. At the discretion of the instructor, the Dean of Students will also be notified as a case of academic misconduct.

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).

Note: The instructor reserves the right to modify the course rules at any time if necessary.