

MATH 2330 – Discrete Structures
Fall 2025

Professor: Dr. David Milan

Office: RBN 4001

Office Hours: MTWR 10am-11am, or by appointment

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Office Phone: 903-566-7210 (email is best)

Web: class page on canvas

Class Meeting Time: MWF 2:30pm – 3:25pm in RBN 4025

Required Text: *Discrete Mathematics: An Open Introduction*, (third edition) by Oscar Levin.

Prerequisites: A grade of C or better in MATH 1325 or MATH 2413.

Course Description: Study of mathematical logic, sets, combinations, relations, functions, graphs and trees, Boolean algebra, and algebraic structures.

Student Learning Outcomes: Upon completion of this course, students should be able to do the following:

1. Recognize the logical format of a given statement in terms of disjunctions, conjunctions, conditionals, quantifiers, and propositional functions.
2. Perform set operations such as union, intersection, and complement.
3. Understand the basic properties of sequences, relations, and functions including specialized topics such as growth functions and Boolean algebras.
4. Demonstrate problem solving skills using elementary probability concepts of permutations and combinations.
5. Write proofs using appropriate methods (direct, indirect, or mathematical induction).

Summary of grading policy: Your grade will be based on:

Quizzes	20%
Hour Exams (3)	60%
Final Exam	20%

The grading scale will be no harsher than: 90% = A, 80% = B, 70% = C, 60% = D.

Quizzes: There will be a quiz each week unless a test is scheduled for that week. Quiz problems will be very similar to the assigned homework.

Homework: Written homework will be assigned daily. Solutions will be discussed during each class meeting. Homework is not graded, but students are unlikely to succeed on the quizzes and exams without first working these problems.

Tests and Final Exams: There will be 3 tests and a comprehensive final exam. A preliminary list of the test dates is given below. At least one week of advanced notice of any change in test dates will be given.

Important Dates:

September 8: Census Date
 November 4: Last day to withdraw
 November 24-28: Thanksgiving holidays
 December 8-12: Final Exams

Final Exam: Thursday, December 11 12:30-2:30pm, room TBA.

Tentative Daily Schedule

		Monday	Wednesday	Friday
1	Aug. 25 – Aug. 29	0.1	0.2	0.2
2	Sep. 1 – Sep. 5	3.1	3.1	3.1
3	Sep. 8 – Sep. 12	0.3	0.3	0.4
4	Sep. 15 – Sep. 19	0.4	Review	Test 1
5	Sep. 22 – Sep. 26	1.1	1.1	1.2
6	Sep. 29 – Oct. 3	1.2	1.3	1.3
7	Oct. 6 – Oct. 10	2.1	2.1	2.2
8	Oct. 13 – Oct. 17	2.2	Review	Test 2
9	Oct. 20 – Oct. 24	2.4	2.4	2.4
10	Oct. 27 – Oct. 31	2.5	2.5	2.5
11	Nov. 3 – Nov. 7	3.2	3.2	3.2
12	Nov. 10 – Nov. 14	4.1	Review	Test 3
13	Nov. 17 – Nov. 21	4.2	4.2	4.5
	Nov. 24 – Nov. 28	Thanksgiving Holiday		
14	Dec. 1 – Dec. 5	4.5	4.5	Review
15	Dec. 8 – Dec. 12	Finals Week		

Calculator Policy: Calculators will not be allowed on quizzes and tests.

Make-ups: Make-ups for **documented** absences that are **required** as part of a UT Tyler obligation (e.g. athletes participating in an event, participating in a debate contest, etc.) or for religious observation will be granted. For all make-ups of this type, prior notification of at least one week and documentation are required. Other make-ups are granted only in extreme cases and at the sole discretion of the instructor.

University Policies: See <https://www.uttyler.edu/offices/academic-affairs/files/syllabus-information.pdf> for these important University policies: UT Tyler Honor code, student rights and responsibilities, campus carry, UT Tyler a tobacco-free university, grade replacement and forgiveness, state-mandated course drop policy, student accessibility and resources, student absence for university-sponsored events, social security and FERPA, emergency exits and evacuation, and student standards of academic conduct.

Artificial Intelligence Statement

UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy.

For this course, all graded work must be done in person without the assistance of AI. You can however, use AI to generate practice problems and solutions if you like.