

MATH 2330
Discrete Structures
Spring 2026

Professor: Dr. Christy Graves

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Office Hours: Monday and Wednesday 9:00-10:00, 11:15-12:00, and by appointment

Class Time: MWF 2:30-3:25

Class Location: RBN 4019

Text: *Discrete Mathematics: An Open Introduction, 4th Edition*, Oscar Levin

Free online at: <https://discrete.openmathbooks.org/dmoi4.html>

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: By the end of the course, successful students should be able to:

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

Canvas: A Canvas site has been set up for this course. All handouts and announcements will be posted here. All assignments must be uploaded to Canvas.

Attendance: Students are expected to attend every lecture, and are responsible for any announcements made during lecture. The course moves quickly, and any absence will be detrimental to the student's performance.

Exams

There will be 4 in-class exams. The exams are on the specific dates listed below:

Exam 1	Wednesday, September 16
Exam 2	Friday, October 9
Exam 3	Monday, November 2
Exam 4	Wednesday, December 2

- There are no make-up exams for any reason. Everyone has the opportunity of replacing their lowest exam score with their final exam score. (See the Grading section.) Thus, if you miss an exam, your final exam score will count for that missed exam.
- Calculators are not allowed on exams.
- Student are not allowed to leave the room during an exam. Please use the restroom ahead of time and plan accordingly.

Homework

Homework is vital to your success in this course. A significant amount of what you gain from this course will be learned through homework assignments. There will be a homework assignment on most non-exam days. Homework is due by midnight the class period after it is assigned. Thus, homework assigned on Tuesday is due Thursday by midnight, and homework assigned on Thursday is due the following Tuesday by midnight. There are a few homework rules to keep in mind:

- All homework must be uploaded to Canvas as a single pdf file.
- Homework is due by midnight the class period after it is assigned.
- No late homework is accepted.

All homework assignments are out of 4 points and are graded based on completion and showing your work. There are 3 possible homework assignment grades:

- All or most of the homework is complete with work on every problem: 4/4
- About half of the homework is complete with work on every problem: 2/4
- Less than half of the homework is done or some problems have no work: 0/4

Lecture Notes

It is very important that you come to class, pay attention, and take notes. To this end, your lecture notes for each class period will be part of your course grade.

- All lecture notes must be uploaded to Canvas as a single pdf file.
- Lecture notes from class are due at midnight on the same day as class.
- No late uploaded lecture notes will be accepted.

All lecture notes assignments are out of 4 points and are graded on completion. To receive full credit, your notes must contain all of the things I write down during class along with all examples and all work. There are 3 possible lecture note assignment grades:

- Lecture notes contain 100% of the material from class: 4/4
- Lecture notes contain at least half of the material from class but not all: 2/4
- Lecture notes contain less than half of the material from class: 0/4

Academic Dishonesty

Lecture notes and homework must be written in your own handwriting. Uploading another student's lecture notes or homework is an act of academic dishonesty and will result in a "0" grade on ALL Lecture Note grades or Homework grades in the course. Any form of academic dishonesty will not be tolerated, and all cases will be reported to UT Tyler Judicial Affairs.

Final Exam

The final exam will be cumulative and will be held:

Wednesday, December 9, 2:45-4:45

Grading

Your final grade in this course will be based on your performance on lecture notes, homework, in-class exams, and the final exam. Your grade will be computed two different ways:

Method 1:		Method 2:	
Lecture Notes	5%	Lecture Notes	5%
Homework	5%	Homework	5%
Highest 4 Exam Scores	60%	Highest 3 Exam Scores	45%
Final Exam	30%	Final Exam	45%

Your final course grade will be the maximum of these.

The grading scale is as follows:

- A final course grade of 90% is at least an A;
- A final course grade of 80% is at least a B;
- A final course grade of 70% is at least a C;
- A final course grade of 60% is at least a D;
- Anything lower than a D is an F.

Late Work, Make-up Exams, and Extra Credit

There is no late work accepted for any reason. Your lowest 3 lecture note assignment grades are dropped. If you miss a lecture and can't get notes from someone, that will be one of your dropped scores. Your lowest 3 homework grades will also be dropped.

There are no make-up exams. If you miss an exam, your final course grade will automatically be computed using Method 2 in the Grading section.

Extra credit: There is no extra credit in this class. Please be sure to keep up with your work throughout the semester.

Important Dates: Exam dates are subject to change.

- September 8 - Census Date
- September 16 - Exam 1
- October 9 - Exam 2
- October 30 - Withdraw Deadline
- November 2 - Exam 3
- December 2 - Exam 4
- December 9 - Final Exam

AI

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 (see below) 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, AI is not permitted at all.

University Policies: For additional university policies, please see:

<https://www.uttyler.edu/offices/academic-affairs/faculty-resources/syllabus-information/>