

Course Information

CE/CS 2305.003/501

Discrete Mathematics for Computing I

Fall 2022

Professor Contact Information

Professor: Dr. James Willson

Email Address: jkw053000@utdallas.edu

Office location: ECSS 4.608

Drop-in office hours Monday 11:30AM-1:30PM, Thursday, 1:30PM-3:30PM, and by appointment.

Course Pre-requisites, Co-requisites, and/or Other Restrictions

Prerequisites: Score of at least 75% in ALEKS or MATH 2312 with a grade of C or better

Course Description

Discrete Mathematics for Computing I (3 semester hours). Principles of counting. Logic and proof methods, including induction. Basic recurrence relations. Basics of algorithm complexity. Sets, relations, functions. Elementary number theory.

Student Learning Objectives/Outcomes

Ability to use and apply basic definitions and properties of logic

Ability to recognize and construct valid proofs including proofs by induction

Ability to understand what an algorithm is, use algorithms, use Big-O notation and algorithmic complexity

Ability to use basic counting techniques

Ability to use and apply basic definitions and properties of sets, relations, functions

Required Textbooks and Materials

Text: “Discrete Mathematics and its Applications”, 8th (or 7th) Edition, Kenneth H. Rosen, McGraw Hill

Textbooks and some other bookstore materials can be ordered online or purchased at the UT Dallas Bookstore (<https://www.bkstr.com/texasatdallasstore/home>).

Academic Calendar

There will be assigned work each week. The due date is Sunday, end of day.

The first due date is Sunday, September 4.

Tentative Test Dates: October 4, November 1, Finals Week (as scheduled by the registrar)

Grading Policy

Homework: Up to 20%

(You cannot score less than 100% for homework. Instead, missed points will reduce how heavily homework is weighted in the final calculation.)

The remainder of the grade will be from the three tests, weighted equally.

The exact score needed to receive a particular letter grade will not be determined until all grades are in.

Course Policies

The assignments for two weeks may be submitted up to a week late without penalty.

Collaboration between students is encouraged for the homework, but do not simply copy. Discuss your ideas freely, but write up your solutions individually.

Tests are individual activities to be done without any collaboration.

There is no extra credit.

Class Materials

The Instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course, however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct (<https://policy.utdallas.edu/utdsp5003>).

Classroom Conduct Requirements Related to Public Health Measures

UT Dallas will follow the public health and safety guidelines put forth by the Centers for Disease Control and Prevention (CDC), the Texas Department of State Health Services (DSHS), and local public health agencies that are in effect at that time during the Spring 2022 semester to the extent allowed by state governance. Texas Governor Greg Abbott's Executive Order GA-38 prohibits us from mandating vaccines and face coverings for UT Dallas employees, students, and members of the public on campus. However, we strongly encourage all Comets to get vaccinated and wear face coverings as recommended by the CDC. Check the Comets United: Latest Updates webpage for the latest guidance on the University's public health measures. Comets are expected to carry out Student Safety protocols in adherence to the Comet Commitment. Unvaccinated Comets will be expected to complete the Required Daily Health Screening. Those students who do not comply will be referred to the Office of Community Standards and Conduct for disciplinary action under the Student Code of Conduct – UTSP5003.

Class Recordings

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student AccessAbility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared

with those not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

The instructor may record meetings of this course. These recordings will be made available to all students registered for this class if the intent is to supplement the classroom experience. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law.

Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

“As a Comet, I pledge honesty, integrity, and service in all that I do.”

Academic Support Resources

The information contained in the following link lists the University’s academic support resources for all students.

Please go to Academic Support Resources webpage (<https://go.utdallas.edu/academic-support-resources>) for these policies.

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus. (<https://go.utdallas.edu/syllabus-policies>)