

## Course Information

CE/CS 2305.501/502

Discrete Mathematics for Computing I

Spring 2024

Section 501: Monday & Wednesday 7:00pm - 8:15pm, FN 2.102

Section 502: Monday & Wednesday 5:30pm - 6:45pm, ECSW 1.315

## Professor Contact Information

Professor: Dr. James Willson

Email Address: jkw053000@utdallas.edu

Office location: ECSS 4.608

Office Hours: Drop-in office hours Tuesday & Thursday, 3PM-5PM, in ECSS 4.608.

## 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  
Ability to understand and apply elementary number theory  
Ability to understand and apply graph theory

## 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 most weeks.

Tentative Test Dates: Exam 1, February 19; Exam 2, April 1; Exam 3, Finals Week

## Grading Policy

18% Exam 1; 36% Exam 2; 36% Exam 2; 10% Homework

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

## Course Policies

Assignments 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.

Exams are individual activities to be done without any collaboration.

There is no extra credit.

## Mentor Center

The Computer Science Mentoring Center (CSMC) is a free resource available to all students taking this class. The CSMC provides assistance in many areas including:

Understanding core concepts related to this class

Developing a logical framework for a program

Connecting programming constructs to the logic of the program

Assisting in solving syntax and logical errors in your code

Exam reviews (by faculty request)

The mentors will meet with you 1-on-1 to address your specific problem areas. Their goal is to help you understand what is wrong and how to fix it, but they will not do the work for you. For more information about the CSMC, including location and hours of operation, please visit <http://csmc.utdallas.edu>

## 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 Accessibility Resource Center accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

## Class Attendance

The University's attendance policy requirement is that individual faculty set their course attendance requirements. Regular and punctual class attendance is expected. Students who fail to attend class regularly are inviting scholastic difficulty. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes.

## **Class Participation**

Regular class participation is expected. Students who fail to participate in class regularly are inviting scholastic difficulty. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures (and/or labs). Class participation is documented by faculty. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

## **Class Recordings**

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the AccessAbility Resource Center 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 AccessAbility Resource Center accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

## **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 see <http://go.utdallas.edu/academic-support-resources>.

# 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. Please review the catalog sections regarding the credit/no credit or pass/fail grading option and withdrawal from class.

Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

*The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.*