Syllabus for CS 2531: Discrete Structures, Spring 2021
Class Time: M 11:00 to 11:50 and T/Th 9:30 to 10:45
Location: https://umn.zoom.us/j/95669598144
Instructor: Dr. Sophia Knight
Office Hours: T/Th 11:00-12:30,
Teaching Assistant: Reilly Moberg
Email: mober105@d.umn.edu
Office Hours: M/Th 12:00-1:00, F 11:00-1:00
Office hours location: https://discord.gg/JtcsfweSRa

We collectively acknowledge that the University of Minnesota Duluth is located on the traditional, ancestral, and contemporary lands of Indigenous people. The University resides on land that was cared for and called home by the Anishinaabe people, and the Dakota people before them, from time immemorial. Ceded by the Anishinaabe in an 1854 treaty, this land holds great historical, spiritual, and personal significance for its original stewards, the Native nations and peoples of this region. We recognize and continually support and advocate for the sovereignty of the Native nations in this territory and beyond. By offering this land acknowledgment, we affirm tribal sovereignty and will work to hold the University of Minnesota Duluth accountable to American Indian peoples and nations.

Part 1. Course Description

Introduction to mathematical foundations for computer science; sets, relations, functions, propositional logic, quantified statements, proof methods, including mathematical induction, countability.

Prerequisites: Calc I or equivalent, with a grade of at least C-.

Max credits: 4, Max completions: 1

Student Learning Outcomes

1. SLO1: Demonstrate competence in a major field. (Knowledge)
2. SLO2: Construct, integrate, and apply knowledge from instruction and experience. (Knowledge)
3. SLO3: Think critically and creatively in seeking solutions to practical and theoretical problems. (Thinking)

Grading Basis

Min	Max	Grade
93	100	A
90	93.99	A-
87	89.99	B+
83	86.99	B
80	82.99	B-

77	79.99	C+
73	76.99	C
70	72.99	C-
67	69.99	D+
60	66.99	D
0	59.99	F

I may lower these cutoffs if appropriate when assigning final grades; the cutoffs will not be raised.

Assessment Components

Item	**Learning Outcomes**	**Percent**
Final Exam	all	20%
Homework	all	40%
In-class quizzes and activities	all	40%

Homework (40% of grade): Homework will be assigned approximately weekly. Each week's assignment will be available on Monday and due at the beginning of next Monday's class. Homework will be submitted on Canvas. Late homework will be deducted 20% and accepted until the beginning of Tuesday's class. Homework will not be accepted more than 24 hours late to allow us to discuss solutions to the previous week's homework on Tuesdays.

In-class quizzes and activities (40% of grade): During most class sessions, there will be a quiz and/or a graded individual or group activity to support the course material. The lowest six grades on these activities and quizzes will be dropped in order to provide for student absences.

Cumulative Final Examination (20% of grade): The final exam will take place during finals week. The exam will be online. Please confirm the time before the exam, as the schedule may change. The final exam policy can be found at this URL https://champ.d.umn.edu/academic-affairs/academic-policies/examination-policies/final-examinations

Part 2. Learning Outcomes and Expectations

Course Requirements: Weekly homework, class quizzes and activities, final exam

Part 3. Course Structure and Materials

Scheduled Final Exam Date and Time

TBA

Faculty

Dr. Sophia Knight, Assistant Professor, Department of Computer Science
email: sknight@d.umn.edu
Office Hours: TBA

Teaching Assistant

Reilly Moberg
email: mober105@d.umn.edu
Office Hours: TBA
Note about email: If you contact your instructor or TA by email please include the class (CS-2531) in the Subject line. Generally, it is better to discuss problems and questions about course material during office hours rather than over email. Email is better suited to simple questions and clarifications. Do not expect replies to be immediate, especially on weekends or in the evening.

Required Text

Textbook: Susanna S. Epp, Discrete Mathematics: An Introduction to Mathematical Reasoning, Brief Edition.

It is important that you have access to the textbook because the instructor will not provide notes on material covered in the book.

The Course Management System (Canvas)

Grades and some course documents, such as the syllabus and a schedule updated weekly, will be available through Canvas. Please note that there will **not** be comprehensive course notes or slides available on Canvas. For this reason students should have the textbook and take notes during lectures.

Syllabus or Calendar Revision The instructor reserves the right to make changes in the syllabus or the course calendar at any time, and without prior notice.

Part 4. Course Policies

Absence from Class

You are expected to attend all classes and it will be difficult to complete the assignments if you miss class. If you are unable to attend a class meeting, it is your responsibility to obtain class notes and other materials from other students in the class. There are no makeups for missed exams unless you have an excused absence that qualifies under the UMD Excused Absence Policy and have cleared it with the instructor beforehand.

Student Conduct

The instructor will enforce and students are expected to follow the University's Student Conduct Code . Appropriate classroom conduct promotes an environment of academic achievement and integrity. Disruptive classroom behavior that substantially or repeatedly interrupts either the instructor's ability to teach, or student learning, is prohibited. Disruptive behavior includes inappropriate use of technology in the classroom. Examples include ringing cell phones, text-messaging, watching videos, playing computer games, doing email, or surfing the Internet on your computer instead of note-taking or other instructor-sanctioned activities.

Group Work

All work submitted on homework and exams must be entirely your own. Group work is valuable for learning, and working on homework assignments in groups is encouraged, but you must write and understand your own, individual solutions. You are welcome to work on the homework assignments in groups, but you should write your solutions alone, not in a group setting, to be sure that you understand them and they are your own work. You must be able to explain all your submitted solutions to the professor or the TA if asked. If you are unable to complete homework assignments on your own you will have difficulty succeeding on the exams.

Late Assignments

Assignments are due at the beginning of class on Monday. Assignments submitted up to 24 hours late will have 20% deducted. Assignments will not be accepted more than 24 hours late.

Extra Credit

There may be opportunities for extra credit. If so, they will be available to everyone and announced in class.

Withdrawal Policy

In accordance with UMD policy, cancellation of courses after the end of the eighth week is not permitted. If you are doing poorly in the class it is your responsibility to talk with the instructor prior to the 8^{th} week to determine what course of action to take.

Final Exam The date and time of the final examination can be found on the UMD Final Exam Schedule . Final exam conflicts are handled according to the UMD Final Exam Policies .

Part 5. Academic Integrity

Academic Integrity

Academic dishonesty tarnishes UMD's reputation and discredits the accomplishments of students. UMD is committed to providing students every possible opportunity to grow in mind and spirit. This pledge can only be redeemed in an environment of trust, honesty, and fairness. As a result, academic dishonesty is regarded as a serious offense by all members of the academic community. In keeping with this ideal, this course will adhere to policies administered by The UMD Office of Student Conduct. This policy sanctions students engaging in academic dishonesty with penalties up to and including expulsion from the university for repeat offenders.

ACM Standards

Most professional computer scientists belong to the Association for Computing Machinery (ACM) which has its own code of ethics. These are the guidelines for this course and include such concerns as respecting the privacy and property of others, giving proper credit for intellectual property and being honest and trustworthy.

Student Conduct Code: Appropriate classroom conduct promotes an environment of academic achievement and integrity. Disruptive classroom behavior that substantially or repeatedly interrupts either the instructor's ability to teach, or student learning, is prohibited. Students are expected adhere to Board of Regents Policy.

Teaching & Learning: Instructor and Student Responsibilities: UMD is committed to providing a positive, safe, and inclusive place for all who study and work here. Instructors and students have mutual responsibility to insure that the environment in all of these settings supports teaching and learning, is respectful of the rights and freedoms of all members, and promotes a civil and open exchange of ideas. To reference the full policy please see this link.

Standards for this Class

From the standpoint of this class, scholastic dishonesty includes the following:

- You may not take credit for work you did not do.
- You may not use any form of outside help on exams (books, notes, computing devices, conversations, etc.)
- You may not assist another in an act of scholastic dishonesty (letting someone else use code you possess or devise is prohibited).

All incidents of cheating, no matter how small, are reported to the UMD Office of Student Conduct.

> **NOTE: There are severe consequences for cheating on exams. If you cheat on an exam the penalty is an F for the exam AND for the entire course.**

Distribution and Sale of Course Materials

Course materials are provided solely for educational purposes for students enrolled in this course. Course materials are copyrighted by the instructor or the publisher of your textbook and may not be distributed to others, in whole or in part, except as permitted under university policy: http://www.d.umn.edu/vcaa/ClassNotesAppropriateUseof.html

Part 6. General Information

The Department of Computer Science

The Department of Computer Science is part of the College of Science and Engineering at the University of Minnesota Duluth, a campus of the University of Minnesota system. The Department was established in 1986. It offers programs leading to the Bachelor of Science and Master of Science degrees in Computer Science and the Bachelor of Science degree in Computer Information Systems.

The mission of the Department of Computer Science is four-fold:

- To conduct scholarly research.
- To provide an instructional environment that leads to careers and research in computer science and information systems.
- To contribute to the liberal education mission of the University.
- To serve the community, state, region, and the profession.

Accreditation

The Bachelor of Science program with a major in Computer Science is accredited by the Computing Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET) , a specialized accrediting body recognized by the Council for Higher Education Accreditation.

Duo Security

If you use Duo Security to sign in to University applications, YOU ARE STRONGLY ENCOURAGED to set up back-up devices in Duo Security so that you are prepared in the event that your primary Duo device is unavailable (you forgot it, it was stolen, it's broken, the battery is dead, etc.). Learn about back up devices at z.umn.edu/backupdevices.

As a Duo user, it is your responsibility to come prepared to sign in to applications necessary for class activities, including exams and quizzes. If you are unable to sign in, you may lose points for the class activity. Failure to bring your Duo device or a back-up is not an excused absence or a valid reason for make up work.

Learn more about Duo Security at z.umn.edu/duosecurity.

Part 7. Resources

Equal Opportunity

As instructor, I shall make every attempt to treat all students equally, without regard to race, religion, color, sex, handicap, age, veteran status, or sexual orientation. I encourage you to talk to me about your concerns of equal opportunity in the classroom. To inquire further about the University's policy on equal opportunity, contact the Office of Equal Opportunity, Rooms 269-273DAdB, phone 726-6827 or log on to their website at www.d.umn.edu/equaloo

Students with Disabilities

It is the policy and practice of the University of Minnesota Duluth to create inclusive learning environments for all students, including students with disabilities. If there are aspects of this course that result in barriers to your inclusion or your ability to meet course requirements – such as time limited exams, inaccessible web content, or the use of non-captioned videos – please notify the instructor as soon as possible. You are also encouraged to contact the Office of Disability Resources to discuss and arrange reasonable accommodations. Please call 218-726-6130 or visit the DR website at www.d.umn.edu/access for more information.

Tutoring Center

The Tutoring Center, located on the second floor of the library in the Learning Commons offers one-on-one interaction with peers, in a non-intimidating atmosphere, as a compliment to your instructional foundation.

Tutoring services are: Free /confidential / walk-in

Tutoring Center hours may be found here.