CS220: Applied Discrete Mathematics
Summer 2022

Class Information

Lectures: Mon. & Wed., 10:00 AM – 1:00 PM (*From July 18 to August 26, 2022*)
Classroom: Zoom Remote (Registering required)

Course web page

https://www.cs.umb.edu/ bangtqh/teaching/cs220_summer22/

Instructor

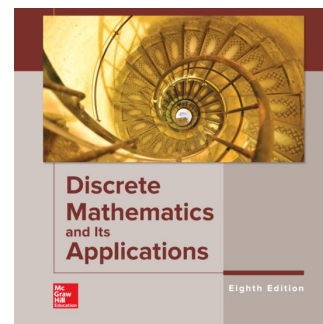*Name:* Bang Tran
Email: bang.tran001@umb.edu
Office hours: Tue. & Thu., 10:30 – 12:30 on Zoom (*From July 19 to August 25, 2022*)

Textbook

Discrete Mathematics and Its Applications, 8th Edition recomended, by Kenneth H. Rosen, WCB/McGraw-Hill, 2019.

Course Description

An introduction to the mathematical structures and concepts used in computing: **logic**, **sets**, **functions**, **sequences**, **induction** and **recursion**, **counting**, **relations**, **graphs**, etc. Formal mathematical proofs are also taught. Prerequisites are CS 110 and Math 140, or permission of the instructor.

Topics covered (tentative)

- Chapter 1: 1.1 – 1.8

- Chapter 2: 2.1 – 2.6

- Chapter 4: 4.1 – 4.4

- Chapter 5: 5.1 – 5.3

- Chapter 6: 6.1 – 6.3

- Chapter 7: 7.1 – 7.2

- Chapter 8: 8.1, 8.5

- Chapter 9: 9.1 – 9.6

- Chapter 10: 10.1 – 10.5

- *Plus other topics in the book if time permits*

Evaluation

There will be 7–8 homework assignments, and 01 final exam. Your final grade will be computed as follows:

- Homework: 50%

- Attendance: 20% *(twice for every class)*

- Final Exam: 30%

Notes:

- **There will be no midterm exam**

- Your final grade will be a (possibly weighted) average of at most 08 homework assignments.

- If P is the final percentage of your homework and participation, then your course grade will be calculated as follows, where decimal points are discarded. For instance, a final grade of 69.99 yields a **C+**, not a **B-**.

- To obtain a final grade of **D-**, or higher, you need to have 30 points in all homework assignments but one. Otherwise, your final grade is capped at **F**.

- To obtain a final grade of **C-**, or higher, you need to have 50 points in all homework assignments but one. Otherwise, your final grade is capped at **D+**.

$95 \leq P$	A
$90 \leq P < 95$	A−
$85 \leq P < 90$	B+
$75 \leq P < 85$	B
$70 \leq P < 75$	B−
$65 \leq P < 70$	C+
$55 \leq P < 65$	C
$50 \leq P < 55$	C−
$45 \leq P < 50$	D+
$40 \leq P < 45$	D
$35 \leq P < 40$	D−
$P < 35$	F

Incomplete grade policy

We consider a portion the required class work to be at most 20% of the total work, as per the incomplete policy[1]. For instance, assuming this course has 8 homework assignments and all assignments have the same weight, then a portion of the required class work would be at most 1 home work assignment. Here is an excerpt from the school's incomplete policy:

The grade incomplete (INC) is reported only where a portion of the assigned or required class work, or the final examination, has not been completed because of serious illness, extreme personal circumstances, or scholarly reasons at the request of the instructor. If your record is such that you

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[1]https://www.umb.edu/registrar/policies/incomplete

would fail the course regardless of your missing work, you will fail.

Homework

- No late homework will be accepted. The reception of assignments is done automatically.

- You may not collaborate with anyone else on any homework. Each homework represents your own, individual work.

- It is acceptable to discuss the concept in general terms, but unacceptable to discuss specific solutions to any homework assignment.

- Homework assignments will be automatically scanned for plagiarism against the present year and all past years of this course.

Student Conduct

Students are required to adhere to the University Policy on Academic Standards and Cheating, to the University Statement on Plagiarism and the Documentation of Written Work, and to the Code of Student Conduct as delineated in the catalog of Undergraduate Programs, pp. 44-45, and 48-52. The Code is available online[2].

- This course follows a **ZERO-TOLERANCE** cheating policy. Any student breaking the Code of Student Conduct will get an F in this course and will be reported according to §II Academic Dishonesty Procedures[3].

- Every solution submitted to our grading server is automatically compared against a solution database for plagiarism, which includes every solution from every student in past semesters.

Accommodations

This class seeks ways to become a working and evolving model of inclusion and universal design for all participants. Individuals with disabilities of any kind (including learning disabilities, ADHD, depression, health conditions), who require instructional, curricular, or test accommodations are responsible for make such needs known to the instructor as early as possible. Every effort will be made to accommodate students in a timely and confidential manner. Individuals who request accommodations must be registered with the Ross Center for Disability Services, which authorizes accommodations for students with disabilities. If applicable, students may obtain adaptation recommendations from the Ross Center for Disability Services[4], M-1-401, (617-287-7430). The student must present these recommendations and discuss them with each professor within a reasonable period, preferably by the end of Drop/Add period.

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[2]https://www.umb.edu/life_on_campus/dean_of_students/student_conduct
[3]https://www.umb.edu/editor_uploads/images/life_on_campus/FINALUMBCode9-5-18-Appendix_B_V2.pdf
[4]https://www.umb.edu/academics/vpass/disability