George Mason University
Department of Mathematical Sciences

Discrete Mathematics I

Fall 2022

Course: MATH-125, section 002. This is a *Mason Core Course* in the category of *Quantitative Reasoning*. The expected learning outcomes are listed at `http://masoncore.gmu.edu/quantitative-reasoning-2/`.

Total Credits: 3.

Purpose: An introduction to the ideas of discrete mathematics; combinatorics, mathematical induction proof technique, sets and graphs.

Prerequisites: Either one of the following requirements will suffice.

- A minimum score of 13 on the Mathematics Placement Algebra I.
- C or better in MATH 105, MATH 108, or MATH 113.

For precise information go to: `https://catalog.gmu.edu/courses/math/` and look up "MATH 125".

These prerequisite are enforced by the registration system. Those having problems registering should talk to Christine Amaya, the Senior Secretary of the Department of Mathematical Sciences, `camaya@gmu.edu`.

Times and Places: TR 1:30 – 2:45 pm David J. King Hall (DK), room 1006.

Period: From August 22 to December 14.

Professor:
Geir Agnarsson
Exploratory Hall 4412
email: `gagnarss@gmu.edu`

Office-hours: TR 11:00 am – 12:00 noon, or by appointment.

Required Text: Susanna S. Epp, *Discrete Mathematics with Applications* Cengage, 5th edition.

Material: Selected sections from Chapters 2 – 10.

Blackboard (Bb): All handouts for this class will be posted as pdf-files on the class Bb site. Please check this Bb site on a regular basis, since short announcements and additional info might be posted there as well.

Homework (HW): HW problems will be assigned every week on Thursdays on Bb. This HW will be through Cengage WebAssign and automatically graded. In order to use WebAssign, you must purchase access to WebAssign! With this access comes access to a pdf version of the textbook.[1]

[1] unfortunately, buying a used hardcopy of the textbook will not grant you access to WebAssign

For technical issues about accessing WebAssign please talk to Laura Miller, Account Executive at Cengage. Her email is: laura.miller@cengage.com. *Working on the homework problems is the best way to learn the material.!*

Examinations: There will weekly quizzes (QZ) during the semester, one midterm exam (MT) and a final exam (FL).

Each quiz (QZ) can be from anything up to that point in lecture and will be made to be no more than 10 minutes long and will be given at the end of Thursday lectures.

The midterm (MT) will cover the material up to that point in lecture. It will be made as a 50 minutes long exam.

The final (FL) will serve as a second midterm exam and roughly cover the material from the midterm exam (MT) to the end of the course. It will also be made as a 50 minutes long exam.

Midterm (MT): Tuesday, October 18, 1:30 – 2:20 pm, DK 1006.

Final (FL): Tuesday, December 13, 1:30 – 2:20 pm, DK 1006.

Grading: The letter grade will be based on the largest one of the following:

1. HW 10% + QZ 30% + MT 20% + FL 40%.
2. HW 10% + QZ 30% + MT 40% + FL 20%.

Policy:

- Absence from an exam, without proper explanation, is an automatic zero on that exam.
- Make-up exams will be considered on an individual basis.

Proper conduct: Needless to say, collaboration of any kind during an exam (quiz, midterm or final) is cheating. You are to abide by the GMU's Honor Code, see oai.gmu.edu/mason-honor-code/

During an exam you are not allowed to help anyone nor receive any help from anyone, except possibly from the exam proctor. You also cannot use any helping device, be it notebooks, text-books, cheat-sheets, websites or calculators, unless otherwise clearly stated on the exam.

Available Help: For help with some of the HW you can see me during office hours, or you can use the Mathematics Tutoring Center, either in person at the Johnson Center room 344 or online through Bb. For more info on tutoring, go to the website
https://science.gmu.edu/academics/departments-units/mathematical-sciences/math-tutoring/tutoring-center-hours-and.

Courtesy: Be courteous to your fellow classmate. During lectures be quiet and please turn off your cellular phones!

Geir Agnarsson
August 30, 2022