

George Mason University
Department of Mathematical Sciences

Discrete Mathematics I

Fall 2020

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: For precise information go to: <https://catalog.gmu.edu/> in “Find a Course” when typing “MATH 125”. Either one of the following requirements will suffice.

- A minimum score of 13 on the Mathematics Placement Algebra I. See info.math.gmu.edu/placement_test.php
- C or better in MATH 105, MATH 108, or MATH 113.

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: online, asynchronous instructional method.

Period: From August 24 to December 16.

Professor:

Geir Agnarsson
email: gagnarss@gmu.edu

Office-hours: W 1 – 3 pm via Zoom.

Required Text: Edgar G. Goodaire and Michael M. Parmenter, *Discrete Mathematics with Graph Theory*. Prentice Hall (2006), 3d edition.

Material: Chapters: 2, 3, 4 (Sec: 4.1, 4.2, 4.3 ,4.4), 5 (Sec: 5.1, 5.2, 5.3), 6, 7, 9, 10 (Sec: 10.1), 12 (Sec: 12.1, 12.2, 12.3).

Homework (HW): HW will be assigned every week. They are not to be handed in. Solutions to most of them will be posted on Blackboard. – *You should attempt them before reading the solutions!*

Examinations: There will be a few quizzes (QZ) throughout 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 about 10 minutes long (exact format and how many TBD).

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): Monday, October 12 (format TBD.)

Final (FL): Thursday, December 10 (format TBD.)

Grading: The letter grade will be based on: QZ 10% + MT 45% + FL 45%.

Policy:

- No exam turned in, without proper explanation, is an automatic zero on that exam.
- In order to pass the class one MUST TAKE THE FINAL!

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.

Geir Agnarsson
August 24, 2020