George Mason University
Department of Mathematical Sciences

Discrete Mathematics I

Spring 2021

Instructor: Laurel Drake
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Office-hours: W 1 – 3 pm via Zoom.

Course: MATH-125, section 005 (synchronous) and section 006 (asynchronous)

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).
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 prerequisites are enforced by the registration system.
Those having problems registering should talk to Christine
Amaya, the Senior Secretary of the Math Department, `camaya@gmu.edu`.

Times and Places:
Synchronous Section 005 will meet online using Zoom, Tuesday and Thursday 10:30 am to 11:45 am. Our class lecture will be recorded by Zoom and can be linked to from Blackboard. Find the Zoom link in the first class announcement from Blackboard.

Students in asynchronous Section 006 may attend the zoom lectures listed above and may watch the recorded Zoom lectures but are not required to do so.

Period: From January 25 to May 7, 2021.

Homework (HW): HW will be assigned every week.

Part of the HW may be designated to turn in to the instructor through Blackboard. Other parts of the HW are not to be turned in. Homework problems to be turned in must be fully explained and justified to receive credit. At some point, solutions to most of the HW will be posted on Blackboard. – *You should attempt them before reading the solutions!*

Assessment:

There will be a weekly quiz (QZ) throughout the semester,
one midterm exam (MT) and a final exam (FL).

- Each quiz (QZ) can be on anything up to that point in the lecture and will be made to be about 20 minutes long (exact format and how many – TBD). There is no makeup for the quiz. If you miss a quiz, then it will be one of the two quizzes that are dropped when forming the quiz average at the end of the semester.
- The midterm (MT) will cover the material up to that point in lecture. It will be made as a one hour 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 1 hour long exam.

Midterm (MT): Friday, March 12 (format TBD.)

Final (FL): Tuesday, May 4 (format TBD.)

Grading: The letter grade will be based on:

(this part will be filled in soon!)

There will be no +/- grades assigned as the course grade. Only A, B, C, D, and F will be given as the course grade.

Policy:

- No exam turned in, without proper explanation, is an automatic zero on that exam. Communication with the instructor is essential if any work or exam is missed, preferably in advance.
- In order to pass the class one MUST TAKE THE FINAL!

Proper conduct:

Collaboration between students on homework is encouraged; however, the handwritten or typed solutions to homework should be each student's own work.

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, such as notebooks, text-books, cheat-sheets, websites or calculators, unless otherwise clearly stated on the exam.