

George Mason University
Department of Mathematical Sciences

Discrete Mathematics I

Fall 2017

Course: MATH-125, section 003. 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: catalog.gmu.edu/ And type “math 125” in the “Search the 2017-2018 Catalog”. Hit “Search” to get the course description. 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 Christina Amaya, the Senior Secretary of the Department of Mathematical Sciences, camaya@gmu.edu, phone (703)-993-1460.

Times and Places: MW 12:00 noon – 1:15 pm Planetary Hall 129.

Period: From August 28 to December 20.

Dates to keep in mind:

September 5: Last day to drop with no tuition liability.
September 5: Last day to add classes.
September 29: Last day to drop with no academic liability.

Professor:

Geir Agnarsson
Exploratory Hall 4412
Phone number: (703) - 993 - 1477
email: geir@math.gmu.edu

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

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).

WebSite: All homework and short announcements for this class will be posted on math.gmu.edu/~geir/courses/125fall17/, the class-WebSite. Additional handouts will be posted as pdf-files.

Please check this WebSite on a regular basis for class news and additional info might be posted there as well.

Homework (HW): HW will be assigned every week, starting on Wednesday August 30. They are not to be handed in, but discussed, if needed the following Monday.

Examinations: There will be a weekly quiz (QZ) for about 10 minutes at the end of each Wednesday class, one midterm exam (MT) and a final exam (FL). A quiz can be from anything up to that point in lecture. The midterm will cover the material up to that point in lecture, it will be 50 minutes long and take place in the class room. The final will be a two hour cumulative exam.

Midterm (MT): Monday, October 23., 12:00 noon – 12:50 pm, Planet 129

Final (FL): Monday, December 18., 10:30 am – 12:30 pm, Planet 129

Grading: The biggest number of the following:

- 1: QZ 20% + MT 30% + FL 50%
- 2: QZ 20% + FL 80%

Policy:

- Absence from an exam, without proper explanation, is an automatic zero on that exam.
- There will be no make-up midterm exam.
- In order to pass the class one MUST TAKE THE FINAL!

Collaboration: 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 or calculators, unless otherwise clearly stated on the exam.

HOWEVER, healthy discussion about the homework problems among your classmates is allowed and encouraged! Be sure though, to write your own solutions.

Available Help: For help with some of the HW you can see me during office hours, or drop in the Mathematics Tutoring Center, located in the Johnson Center room 344. For more info on tutoring, go to the WebSite math.gmu.edu/help-with-math.php.

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

Geir Agnarsson
August 28, 2017