

Math 125-DL1 Discrete Mathematics

Meeting Time: MW 9:00-10:15

Location: Blackboard Collaborate

Instructor: Ellen O'Brien

Office: Exploratory Hall 4205

Office Hours Online: MW 10:15-10:45 (after class) and by appointment (just send me an email)

Email: eobrien@gmu.edu (Please include Math 125 in the subject line)

Text and Materials:

Discrete Mathematics with Graph Theory, by Edgar Goodaire and Michael Parmenter,

Third Edition, Pearson, 2006 (ISBN: 978-0-13-468955-5 or 0-13-468955-0)

Course Description: This course meets the quantitative reasoning requirement, one of the Foundation requirements of the Mason Core. The goal of the Foundation requirement is to help ensure that students are equipped with the tools and techniques necessary to succeed in college and throughout their lives and careers. The specific Quantitative Reasoning learning outcomes are set by the Mason Core Committee:

1. Students are able to interpret quantitative information (i.e., formulas, graphs, tables, models, and schematics) and draw inferences from them.
2. Given a quantitative problem, students are able to formulate the problem quantitatively and use appropriate arithmetical, algebraic, and/or statistical methods to solve the problem.
3. Students are able to evaluate logical arguments using quantitative reasoning.
4. Students are able to communicate and present quantitative results effectively.

We will cover the following topics:

- Logic 1.1-1.3
- Sets and Relations 2.1-2.5
- Principles of Counting 6.1 - 6.3
- Permutations and Combinations 7.1, 7.2, 7.5, 7.6, 7.7
- Induction and Recursion 5.1 - 5.3
- Graphs 9.1 - 9.3
- Paths and Circuits 10.1, 10.2, 10.3
- Trees 12.1 - 12.3, 12.5
- Planar Graphs 13.1, 13.2

Exams:

- Test 1 - Monday October 4 -1101 Nguyen Engineering Building, Jajodia Auditorium
- Test 2 - Monday November 15- 1101 Nguyen Engineering Building, Jajodia Auditorium

Final Exam: Monday December 13, 7:30am -10:15am- 1101 Nguyen Engineering Building, Jajodia Auditorium

Exam Policy: You will be required to take the exams in person. Exams will be given in 1101 Nguyen Engineering Building, Jajodia Auditorium

Grading: Your grade for the course will be calculated based on two exams, quizzes, and a final exam. Each test is worth 100 points, the quizzes will total 100 points, and the final exam 200 points. The sum of these grades divided by 5 will determine your grade according to the scale:

A: 90-100 B: 80-89.9 C:70-79.9 D:65-69.9 F: below 65

+ or - will be attached to the grade for the upper or lower 2 points in each range

NO MAKE-UP TESTS or quizzes will be given. If you miss an exam contact me ASAP.

Student Expectations

- Attendance- you are expected to attend every scheduled online class (Collaborate Ultra linked on left menu). There will sometimes be supplementary videos available but **I do not record the class lectures.**
- Take notes - it is a good practice to take notes when you are attending online lecture in the same way that you would normally do in a face-to-face class.
For online lectures, notes will be available and distributed in our One Note Class Notebook
- Preparation- you are expected to be prepared for class. The preparation includes doing homework problems, watching available videos and reading the textbook.
- Blackboard will contain all information about the course. You should check Blackboard regularly for announcements and class materials.
- Meet deadlines for Blackboard Quizzes.

Homework: Homework problems will be assigned at the end of each class. I will post video solutions of assigned HW problems. You will have the opportunity to ask questions about the HW problems at the beginning of class. Reading the sections of the text related to the problems is a part of the homework assignment. I will post the assignment regularly on the course Blackboard.

Quizzes: There will be weekly quizzes on Blackboard. These quizzes will usually be available on Wednesday shortly after class and your answers must be submitted by Sunday at 11:59 pm. Your score will show as soon as you submit the quiz, but the answers will appear only after the deadline. NO make-up quizzes will be possible for any reason. Some quizzes may be given in class.

Honor Code: Sharing information of any kind about exams or quizzes is an Honor Code violation. Some kinds of participation in online study sites violate the Mason Honor code: these include accessing exam or quiz questions for this class; accessing exam, quiz, or assignment answers for this class; uploading of any of the instructor's materials or exams; and uploading any of your own answers or finished work. Always consult your syllabus and your professor before using these sites. Any violations will be referred to the Office of Academic Integrity. Let me be very clear: at no time is it acceptable to post problems from this course (Worksheets, Quizzes or Exams) on websites like Chegg.com, Bartleby or similar cheating websites. Violations will be sent to the Office of Academic Integrity.

Disability statement: If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Services at 703-993-2474. All academic accommodations **must** be arranged through that office.

General Remarks: Be respectful of other students in the class. We all have different experiences in Mathematics. What is easy for one person may be challenging for another.

I am here to help. If there is anything that you have trouble with just let me know. I can try to help over email or I can meet with you in the Collaborate room.

I will structure and organize the course with weekly units on Blackboard to make it easier for you to follow. Be aware of deadlines. Keep on top of the class and try not to get behind.

Mason's Nondiscrimination Policy: George Mason University is committed to providing equal opportunity and an educational and work environment free from any discrimination on the basis of race, color, religion, national origin, sex, disability, veteran status, sexual orientation, or age. Mason shall adhere to all applicable state and federal equal opportunity/affirmative action statutes and regulations. Moreover, in this class we seek to create a learning environment that fosters respect for people across the entire range of human identities. We encourage all members of the learning environment to engage with the material personally, but to also be open to exploring and learning from experiences different than their own.

CLASS SCHEDULE

M	W
Aug 23: Sec 1.1	Aug 25: Sec 1.2, 1.3
Aug 30: Sec 2.1, 2.2	Sept. 1: Sec 2.3
Sept. 6: Labor Day No class	Sept. 8: Sec 2.4
Sept. 13: Sec. 2.5	Sept. 15: Sec 6.1, 6.2
Sept. 20: Sec. 6.2, 6.3	Sept. 22: Sec 7.1, 7.2
Sept. 27: Sec 7.5	Sept. 29: Sec 7.6
Oct. 4: Test 1	Oct. 6: Sec 7.7
Oct. 12: We meet Tuesday Sec 5.1	Oct. 13: Sec 5.2
Oct. 18: Sec 5.3	Oct. 20: Sec.9.1, 9.2
Oct. 25: Sec 9.3	Oct. 27: Sec 10.1, 10.2
Nov. 1: Sec 10.3	Nov. 3: Sec 12.1
Nov. 8: Sec 12.2	Nov. 10: Sec 12.3
Nov. 15: Test 2	Nov. 17: Sec 12.5
Nov. 22: Sec 13.1	Nov. 24: Thanksgiving No Class
Nov. 29: Sec 13.2	Dec. 1: Course Review
Dec. 6: No Class	Dec. 8: No Class
Dec. 13: Final Exam 7:30-10:15	

IMPORTANT DATES

- September 6: Labor Day
- September 15-27: Unrestricted Withdrawal
- October 11 Fall Break (Monday classes meet on Tuesday)
- September 28-October 27 : Selective Withdrawal Period (you can use the selective withdrawal a maximum of 3 times as an undergraduate)
- November 24-November 28 Thanksgiving Holiday
- December 4: Last day of classes.