Instructor: Mrs. Maliha J. Luqman
Email: mluqman@gmu.edu
Office Hours:
Zoom: MW 12:30-1:30PM
https://vccs.zoom.us/j/2487470924 Passcode: 257252
Please email if these don't work for you.

Course Information:
Section: B02 - 3 credits
Lectures: Videos (Blackboard)

Course Description

Course Prerequisites: A grade of C or better in MATH 105 or a passing score on the Math Placement Test. If you have not met the formal prerequisites for the course, you cannot stay in the course. Information on the Math Placement Test is available at https://science.gmu.edu/academics/departments-units/mathematical-sciences/mathematical-sciences-testing-center

Course Description and Objective:
Introduces ideas of discrete mathematics and combinatorial proof techniques including logic, number theory, mathematical induction, sets, graphs, trees, recursion and enumeration.

Textbooks and Materials

Text: Discrete Mathematics with Applications by Susanna Epp. The eText is available on WebAssign which you will use to complete your homework.

Technology:

- a computer/tablet with internet to access Blackboard, Zoom and WebAssign.
- a tablet/phone with camera to take proctored exams (yes, you need two devices for exams)
- a handheld calculator (TI-83/84, if you have one already, a TI-30II is fine) during exams.
- Recommended: a stylus to write on the "board" during class

Assessments and Grading Scale

Posting of Grades: Student assignments will be evaluated within a week and posted to Blackboard one week after the assignment due date.

Grading Scale:

A	A-	B+	B	B-	C+	C	C-	D	F
93-100	90-92	87-89	83-86	80-82	77-79	73-76	70-72	60-69	0-59

There are 5 components that will determine your grade:

1. Video Quizzes – 5%
2. Activity Sheets (will drop 2 lowest) – 15%
3. WebAssign Homework – 15%
4. Exams (2 given in-class, about 1.5 hours each) – 20% x 2
5. Comprehensive Final Exam – 25%

Assessments

- **Video Quizzes (5%)**: Since this is an *asynchronous* class, each week there will be several short videos. Some will contain video quizzes to ensure active participation. You may use your notes and/or textbook while answering these questions, but no online resources. Your two lowest weekly scores will be dropped at the end of the semester.
- **In-class Activities (15%):** Activities will be assigned and due according to the course schedule. All assignments are to be submitted in Gradescope by Sunday. Late assignments will not be accepted; however, your two lowest scores will be dropped at the end of the semester.
- **WebAssign Homework (15%)**: There will be homework corresponding to each homework section we cover in class. **Expect to work 15-20 hours a week for this course.**
- **Exams:** There will be two Zoom exams in addition to the comprehensive final. Exams make up the majority of your grade. Cheating of any form will not be tolerated. I allow an exam-swap policy, whereby if the grade on your Final Exam is higher than your lowest exam score, the lowest exam score will be replaced with your final. As a result, missing exams for non-emergency reasons results in a zero on the exam. Exam days and times will be determined via survey. Please refer to your other course and work schedules to determine which would be the best time for you.
- **Final Exam**: The final in-class exam is comprehensive. The final exam is worth 25% of your grade. There will be no make-ups permitted for the final exam. The date is already set by the university, so please do not make other plans on the date of the final exam such as appointments, early vacation departures, family outings, etc. Such changes are not negotiable.
- **Extra Credit**: There will be NO extra credit assigned. Please do not ask.

Course Policies

Communication

I frequently send announcements through email via Blackboard announcements. You can refer to past announcements in Blackboard if you have trouble going through your email. Faculty, staff, and administrators communicate with students through their official GMU email accounts (@gmu.edu). Students are likewise required to use their Masonlive email accounts (@gmu.edu or @masonlive.gmu.edu) to communicate with instructors and other college personnel and should check their email accounts regularly. I will use Blackboard to post announcements, grades and other important information pertaining to the class. You can access this by going to mymason.gmu.edu and logging on using your NetID.

Instructors receive a significant number of emails from students over the course of the semester. To specifically identify the course in which the student is enrolled, all email from the student must include the course and section number (e.g., MATH 125 – 008, Absence Excuse) in the subject of the email.

Additional Resources and Information

Academic Integrity: Violations of the honor code will not be tolerated.

Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work.

Mason Honor Code is available at: https://oai.gmu.edu/mason-honor-code/

Religious Holidays: GMU is accommodating to all religious holidays observed by its students and faculty. It is each student's responsibility during the first two weeks of the semester to inform instructors the dates of any major religious holidays on which the student will be absent or unavailable due to religious observances. https://ulife.gmu.edu/religious-holiday-calendar/

Disability statement: If you are a student with a disability and you need academic accommodations, please contact Disability Services at 703.993.2474. All academic accommodations must be arranged through that office. Your accommodations sheet must be submitted on Blackboard at least one week prior to any assessment that you are requesting accommodations for. https://ds.gmu.edu/

Tutoring Center: The Mathematics Tutoring Center is offering online tutoring services to students currently enrolled in undergraduate math courses at GMU. Please see the website for details: http://math.gmu.edu/tutor-center.php

Student Privacy/FERPA: The Family Educational Rights and Privacy Act of 1974 (FERPA) is a federal law that governs the education records of eligible students. It grants students continuous access to their education records upon request, allows students to amend their records if they feel they're inaccurate, and restricts how and when their education records can be disclosed. https://registrar.gmu.edu/ferpa/

Netiquette: Craft your messages carefully to avoid misinterpretation. Keep these online communication strategies in mind:

- Avoid vague words, jargons, and sarcasm—any rude or disrespectful posts will result in a grade deduction
- Edit meticulously

ITS Support Center: The ITS Support Center serves as the central point of contact for the university community for requesting IT support or information. Additional details and resources are located at https://its.gmu.edu/service/its-support-center/ Email support@gmu.edu or call 703-993-8870 for technical support.

Keep Learning, Learning Services https://learningservices.gmu.edu/keeplearning/

Counseling and Psychological Services https://caps.gmu.edu/

University Libraries https://library.gmu.edu/

See a longer list of Mason student support services posted on **The Stearns Center** website:

https://stearnscenter.gmu.edu/knowledge-center/knowing-mason-students/student-supportresources-on-campus/

Important Campus-wide Dates

Classes Begin	Tuesday, May 30
Last day to add	Thursday, June 1
Last day to drop a class with a tuition refund	Thursday, June 1
Last day to drop (50% refund)	Wednesday, June 14
Unrestricted Withdrawal Period (W on transcript) • If you do not withdraw by this date and do not complete your assignments, your grade will be based on what you have submitted, this is usually an F.	June 15-22
Juneteenth (University Closed)	Monday, June 19
Selective Withdrawal Period (W on transcript) • If you do not withdraw by this date and do not complete your assignments, your grade will be based on what you have submitted, this is usually an F. • You are limited to 3 withdrawals in your academic career	June 23-July 11
Final exam	July 27, time TBD

Tentative Schedule

	Date	Sections and Topics:	Assignments
Week 1	T: 5/30	1.1 Variables 2.1 Logical Form and Logical Equivalence 2.2 Conditional Statements 2.3 Valid and Invalid Arguments	Activity 1
Week 2	M: 6/5	1.2 The Language of Sets 6.1 Set Theory 6.2 Properties of Sets 6.3 Disproofs and Algebraic Proofs	Activity 2
Week 3	M: 6/12	9.1 Introduction to Probability 9.2 The Multiplication Rule 9.3 The Addition Rule 9.4 The Pigeonhole Principle 9.5 Combinations and Permutations	Activity 3
Week 4	T: 6/20	**Exam 1 (Sections covered in Ch. 2, 6 & 9)** 1.3 The Language of Relations and Functions 7.1 Functions on General Sets 7.2 One-to-One, Onto, and Inverse Functions	**WebAssign**: 1.1-1.2, 2.1-2.3, 6.1-6.3, 9.1-9.5
Week 5	M: 6/26	8.1 Relations on Sets 8.2 Reflexivity, Symmetry and Transitivity 8.3 Equivalence Relations 8.4 Modular Arithmetic 8.5 Partial Order Relations	Activity 4
Week 6	M: 7/3	5.1 Sequences 5.2 Mathematical Induction 5.4 Strong Mathematical Induction 5.6 Defining Sequences Recursively 5.7 Solving Recurrence Relations by Iteration	Activity 5
Week 7	M: 7/10	**Exam 2 (Sections covered in Ch. 5, 7 & 8)** 1.4 The Language of Graphs 10.1 Trails, Paths and Circuits 10.3 Isomorphisms on Graphs	**WebAssign:** 1.3, 7.1-7.2, 8.1-8.5, 5.1-5.2, 5.4, 5.6-5.7
Week 8	M: 7/17	10.2 Matrix Representation of Graphs 10.4 Trees 10.6 Spanning Trees and Shortest Path Algorithms	Activity 6
Week 9	M: 7/24	**Final Exam 7/27** (Time TBD)	**WebAssign:** 1.4, 10.1-10.4, 10.6

*****ITEMS ARE SUBJECT TO CHANGE AND WILL BE UPDATED ON BLACKBOARD ACCORDINGLY.*****