George Mason University
MATH-123 – Calculus I (3 credits)
Fall 2022

Instructor: **Ahsan Chowdhury** **Learning Assistants: Darius Jack and Siddharth Garg**

Email: **achowdh6@gmu.edu**

I reserve email primarily for personal matters. Please read the syllabus and check the syllabus and our course page prior to emailing me about logistics in this course. Math questions are difficult to resolve over email. Please post a photograph of both the problem and what you have attempted on a problem in any email, or better yet, attend one of the listed office hours, or the math tutoring center.
Email only after you have exhausted these options:

1. Read the syllabus.
2. Look at the announcements on Blackboard.
3. Listen carefully when I'm making announcements in class. This means you have to be on time.
4. If you miss class, ask another student what you missed. This is not a reason for emailing me.

All math questions should be asked in person after class, during office hours or with Learning assistants.

Instructor Policies: I do not accept late work, but I will drop at least one assignment in each category other than tests.

Office Drop in Hours & Location: Ahsan: Exploratory Hall 4223 Mon/Thurs (3pm-4:30pm), and by appointment.
Learning Assistants Darius and Sid TBA during the first week of class.

Class Meeting Time and Location: Peterson Hall 1113, Monday and Wednesday 1:30 –2:45 PM

Required Materials:

1. *Thomas' Calculus: Early Transcendentals*, 14th edition, by Hass, Heil Weir. If you already have a book, or had MML access previously, you do not need to buy another one.
2. You need to access MyMathLab through the link on Blackboard. I believe once you open the shrink wrap on your book from the bookstore, you cannot return it due to the code issue. I suggest starting with free access to the ebook, videos, support and homework by clicking the link on Blackboard and following directions. YOU DO NOT NEED A COURSE CODE, follow the prompts provided after clicking on the Blackboard link, and find the option at the bottom for starting with free access for two weeks.
3. **Dry erase markers – bring to class every day. I suggest black, blue and red**.
4. **An old mismatched sock to put the dry erase markers in inside your backpack and to use as an eraser during class. A washcloth and ziplock or pencil pouch will serve the same purpose**.
5. We rarely use calculators in this class. I suggest you do not use them on your homework.

Course Description: This is the first part of a two semester sequence that covers algebra through basic calculus covered in Math 113. Math 123 will review basic precalculus and then proceed to cover limits and derivatives. The course requires a serious time commitment, both in attendance and outside time for homework and studying. This course is taught in an active learning classroom. Research has shown that student participation and interaction in the classroom improves learning outcomes.

Attendance:

The best chance of passing this course comes from 1) attending and participating in class, and 2) doing the work. Don't focus on the grade as much as learning the concepts as you will need them moving forward into 124 and any other Calculus sequence classes you take.

If you miss class, you miss the opportunity for help on the material presented, discussed and worked on that day in class. Regardless of whether you are present or absent from class, **you** are responsible for everything that happens in class (assignments, homework, quizzes, etc).

There will be collaborative activities in class most days. Any work done and collected for a grade during class cannot be made up – It also provides opportunities to interact with the material, deepen your understanding, and provides grades outside of tests.
I understand that sometimes people are sick or have conflicts with class. A reasonable number of absences should not adversely affect your grade. I do not generally track excused or unexcused absences in this course. Please follow GMU COVID protocols and email me if you need to isolate or have a positive test, I will have a place for you to submit that paperwork on Blackboard.

School Closure

In case of school closure, late start, or canceled class, you will have video lecture from me and assignments, so check your email. I try to keep this class on schedule as best I can.

Homework:

Working homework is the most important part of the learning process in this course. Please be sure you have allocated enough time for this course. **Most people need a minimum of ten hours per week dedicated to working problems in this course**. If your math background has some gaps or you just need more time to process things, plan for that accordingly by planning at least two hours per day to work math problems. Learning math is NOT a passive activity.

Homework is assigned in MyMathLab and by hand. MyMathLab homework will be due once per week and written homework will be assigned in class, usually due by the START of the next class over blackboard. I do not accept late work.

MyLabMath:

MyLabMath is an online software system that accompanies your textbook. There will be Homework due weekly (usually on Fridays) and quizzes due weekly by Tuesday of the following week which cover the content from the prior week. There **may** be portions of tests in MyLabMath/Blackboard proctored in the Math testing center, but there will also be written portions of each test done in class.

To sign up for MyLabMath:

1. Login to our blackboard course at mymason.gmu.edu
2. Click on "MyLabMath" on the left.
3. If you have a Pearson account, then login. Otherwise, sign up for a new account.
4. Select an option
    a. Use an access code (if you bought a new book, you got one of these).
    b. Buy access online with a credit card
    c. **Get 17 days of temporary access** (look for the tiny blue link at the bottom)
5. YOU DO NOT NEED A COURSE CODE. You will not be prompted for one if you start from the single sign on link on Blackboard.

MyLabMath Technical Support: https://support.pearson.com/getsupport/s/contactsupport (available 24 hours a day) Pearson Customer Service and Technical Support: 800-677-6337.

MLM is a computer graded system. If you get problems right, they are marked correct. There is no partial credit on individual questions. The computer system, like most technical systems is picky about inputs, so please check your answers before submitting your work.

MyLabMath Homework is accepted up to 2-3 days late for a 20% penalty. MyLabMath quizzes are not accepted late.

Quizzes (In-Class & MLM) Preparation:

You need to prepare for every class. This includes reading the material that we will be covering in lecture, taking notes over your reading and working the examples, and doing any other problems I assign. Sometimes there are pop-quizzes given randomly in class throughout the semester. I also give "quizzes" that are things like checking if you did the preparation work, asking you to work with other people etc. No make-up quizzes are given.

Each week, you will also have a 10-20 minute quiz over MLM that you will need to take at the math testing center (Exploratory Hall, room 4107). See the testing center hours here: http://math.gmu.edu/placement_test.php. Quizzes will be posted Thursday of each week and remain open to be taken until Tuesday of the following week.
All you need to do is walk into the testing center during their working hours and when a quiz is posted. Bring your id for identity confirmation and something to write with. Then, log into the MLM section that has assignments (same place as HW), go to the Quiz for that week, click on it and the proctors will enter a password for you to begin. You are only allowed a 4 function calculator. You can ask the proctors for scrap paper. You must turn in all scrap paper to the proctors when you are done

One or more quiz grades will be dropped to account for late-adding the course, illness, car trouble, or any other excused or unexcused absences.

Tests & Final Exam:

There are 2 exams in this course, and one comprehensive final exam. There are no make-up exams unless you have a documented excused absence (that is an absence that I consider excused, like being in the hospital). Decisions about excused absences are solely at the discretion of the instructor. Most likely, rather than making up a missed exam, other than the final, that test grade would just be replaced with your final exam. Get good sleep, eat well, hydrate and exercise and stay healthy!

Exam dates are provided on the last page in the schedule. I reserve the right to change exam dates as the semester progresses. The final exam date is given in the schedule on the last page of the syllabus. The final exam date is set by the university so that it will not interfere with any other final exams and that date will not change unless the university changes the exam schedule. There are no make-ups for the Final Exam.

All exams are given to uphold strict academic integrity standards. The following policies are in place for each exam.

1. No collaboration is allowed on the exams (unless specified). Any indication that you have worked together, used someone else's ideas, copied, or allowed a fellow student to copy your work is a violation of the GMU Honor Code. The exam should be your work and your work only.
2. No calculator is allowed on exams except where noted. No other books, notes, cell phones, computers or aids may be used. Having access to any unauthorized materials, calculators or devices while you are in possession of the exam is a violation of the academic honesty code.
3. Once you receive the exam, you are not allowed to leave the exam room until you are ready to turn the exam in.

Requirements and Grading:

MML/Textbook Homework	20%
MML/In-person quizzes	10%
Attendance/Participation	10%
Exam 1 (MML/Blackboard & Paper)	20%
Exam 2 (MML/Blackboard & Paper)	20%
Final (MML/Blackboard & Paper)	20%

Scale:

100-90	A

89-80	B
79-70	C
69-60	D
59-0	F
+/-	Added at Instructor discretion

Withdraw & Audit

See the GMU website for important add/drop deadlines: http://registrar.gmu.edu/calendars/

Tutoring:

The Math Tutoring Center is located in the Johnson Center Room 344. Help is available on a walk-in basis. For hours of operation see *http://math.gmu.edu/tutorcenter.htm*

The Volgenau School of Engineering also offers peer tutors.
http://volgenau.gmu.edu/undergraduates/peer-mentors

MyLabMath is also a resource available for this class. In MLM there are lecture videos, and step - by-step instructions on how to complete homework problems.

Academic dishonesty and the GMU Honor Code:

You are expected to follow the GMU Honor Code *http://academicintegrity.gmu.edu/honorcode/*

No collaboration is allowed on quizzes or tests. Any indication that you have worked together, used someone else's ideas, copied, or allowed fellow student to copy your work is a violation of the GMU Honor Code.

Some of the behaviors that will be considered cheating are:

- Communicating with another person during an assessment
- Copying material from another person from any assignment being graded
- Allowing another person to copy from any assignment being graded
- Use of unauthorized assistance on any assignment being graded
- Use of unauthorized notes or books during an assessment
- Providing or receiving a copy of a quiz or exam used in the course
- Use of a cell phone during an assessment

Learning Differences & Special Needs

If you have a learning or physical difference that may affect your academic work, please see me and contact the Office of Disability Services (ODS) at 993-2474, http://ods.gmu.edu . All academic accommodations must be arranged through the ODS. Please submit your accommodation sheet under the Accommodations tab on the left side of Blackboard.

MATH-123 - Calculus (3 credits) Course dates are tentative and subject to change.

Week	Topic
1; week of 8/22 MML HW due Friday, MML Quiz due Tuesday of week 2	Class Introduction/Syllabus/Grade Policy Discussion Review and 1.1 1.1– Functions and their Graphs (no piecewise functions) Unit Circle
2; week of 8/29 MML HW due Friday, MML Quiz due Tuesday of week 3	1.2 – Combining Functions – Shifting and Scaling Graphs 1.3 – Trig Functions – Graphs
3; week of 9/5 MML HW due MML Quiz due Tuesday of following week	Labor Day Break – No class 1.3 – Solving Trig Equations / 1.2 – Composition of Functions
4; week of 9/12 MML HW due	1.5/1.6 - Inverse Functions, Exponential Functions LA Review sessions (There will NOT be a quiz next week due to Exam) **Exam 1: Exams will be taken in class**
5; week of 9/19 MML HW due MML Quiz due Tuesday of following week	1.5/1.6 – Inverse Functions, Log functions & maybe Arctrig functions 1.5/1.6 - Solving Log/Exponential equations
6; week of 9/26 MML HW due MML Quiz due Tuesday of following week	2.1- Rates of Change and Tangent lines to curves 2.4/2.2 – One sided and two-sided limits, Piecewise Functions
7; week of 10/3	2.2 – Limit laws, Limits based on operators, Limits based on function classification, Maybe Squeeze (sandwich) theorem

MML HW due MML Quiz due Tuesday of following week	2.5 – Continuity, Limits based on continuity
8; week of 10/10 MML HW due	**Flexible/catch up day; to make up for Labor day break** 2.6 – Limits with infinity; VA and holes, HA (End Behavior)
	3.1 – Tangent Lines and the Derivative at a point (with 2.1)
9; week of 10/17 MML HW due	3.2 – The Derivative as a Function
	LA Review sessions (There will NOT be a quiz next week due to Exam) **Exam 2: Exams will be taken in class**
10; week of 10/24 MML HW due MML Quiz due Tuesday of following week	3.3 – Differentiation Rules (Basics – power rule, sum/difference, constant multiplier)
	3.3 – Differentiation Rules (product/quotient)
11; week of 10/31 MML HW due MML Quiz due Tuesday of following week	3.5 – Derivatives of Trig Functions
	3.6 – The Chain Rule (decompositions) Derivatives of Logs (basic intro for MML)?
12; week of 11/7 MML HW due MML Quiz due Tuesday of following week	3.6 – The Chain Rule (really hard problems)
	3.7 – Implicit Differentiation
13; week of 11/14 MML HW due MML Quiz due Tuesday of following week	3.7 – Implicit Differentiation
	3.8/3.9 – Derivatives of Inverse Functions and Logs
14; week of 11/21	3.2/3.4 – The Derivative as a Rate of Change , Thanksgiving Break

15; week of 11/28 MML HW due 12/3	3.2/3.4 – The Derivative as a Rate of Change / Review Review
16	**Review session on Reading Days in our regular classroom/time** **Cumulative Final Exam in our normal classroom** WED 12/7 (1:30pm-4:15pm) **No early finals. No late finals. Be there.**

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1; week of 8/22 MML HW due Friday, MML Quiz due Tuesday of week 2	Class Introduction/Syllabus/Grade Policy Discussion Review and 1.1 1.1– Functions and their Graphs (no piecewise functions) Unit Circle
2; week of 8/29 MML HW due Friday, MML Quiz due Tuesday of week 3	1.2 – Combining Functions – Shifting and Scaling Graphs 1.3 – Trig Functions – Graphs
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7; week of 10/3 MML HW due MML Quiz due Tuesday of following week	2.2 – Limit laws, Limits based on operators, Limits based on function classification, Maybe Squeeze (sandwich) theorem
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This calendar was adjusted after realizing I want a day more on 2.6, still need to adjust if I want to have another day for 2.3 to do things like sqz thm and give more practice on organizing all the limit approaches