Math 113   Calculus of a Single Variable   Fall 2022

Instructor:	**Ahsan H. Chowdhury (achowdh6@gmu.edu)**
Time/Location:	**Section: 005; MonWed 8:30am-10:20am** **Exploratory Hall L102** Recitation Instructor: Julia Seay (jseay2@gmu.edu)
Office:	Exploratory Hall 4223
Textbook:	*Thomas' Calculus: Early Transcendentals, 14th edition, by Hass, Heil, Weir.*
Prerequisite:	The prerequisite is Precalc (minimum grade of C) or an equivalent.
Student Drop in Hours (@ my office):	Mon/Thurs (3pm-4:30pm), in Exploratory Hall 4223; or email me (achowdh6@gmu.edu) for meeting at another time over zoom or in person

Attendance
Class attendance will be taken and kept for Mathematics Department records. Students are responsible for course materials and announcements covered in class.

Classroom Courtesy Statement
You and your classmates are here to learn, and that happens best in an atmosphere of mutual respect with freedom from distractions and disturbances. Part of this mutual respect involves letting me know what pronouns you prefer to go by (indicate these in your zoom name).

Homework, Quizzes, & Recitation Work
Homework assignment due dates will be posted on our course page and MyLabMath. MyLabMath is an online software system that accompanies your textbook. There will be Homework and quizzes due weekly which cover the content from the prior week. To sign up:

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

Quizzes will be given to test that students are keeping up with material taught in class. Students should prepare for quizzes by reviewing the material from class and completing the assigned homework. Suggested problems from the textbook can be found on the syllabus should students need additional practice. Attendance and Student work during recitations will also count towards this portion of your grade. **Non- MyLabMath Assignments are considered late after their due dates. Late Non- MyLabMath assignments are only accepted if they meet the conditions in the Make-Up policy.**

Tests
There will be 2 midterm exams and a comprehensive final exam. Each mid-term test will be comprised of **a multiple choice/short answer portion (proctored in the Math testing center or in**

class) _AND_ a recitation portion (taken during your recitation section). The dates/times for these are listed below.

	Test Date (Tentative)
Test 1	**Part 1 (Week 5, Part 1 @ testing center or class), Part 2 (in recitation of week 6)**
Test 2	**Part 1 (Week 10, Part 1@ testing center or class), Part 2 (in recitation of week 11)**
Final Exam	**Part 1 & Part 2 (in class according to final exam schedule, also on our course calendar under the syllabus tab)**

You must take tests on the specified date. If you have a verified conflict with the time scheduled for an exam, contact me as soon as possible. Usually, makeup exams will not be given unless the conditions in the Make-Up policy are met. Both these situations will be handled on an individual basis.

The final exam is a required class meeting that will not be rescheduled for discretionary reasons, including conflicts with work schedules, conflicts with classes and exams at other colleges, and travel plans.

Make- Up Policy
If you have a documented reason for being unable to complete and/or submit an assignment, quiz, or exam at its scheduled time, you may have the opportunity to make-up the assignment. This will occur at my discretion, on an individual basis. If I approve of the make-up work, we will discuss the deadlines for that assignment. To increase the likelihood that this will occur, you should do the following:

• If you know you will be absent during a specific class meeting, provide the documentation well in advance of that class meeting.
• If you miss a class meeting due to sudden illness or an emergency situation, contact me as soon as possible with the necessary documentation.

Grading
Graded work for the course is split into the following categories:

• 25% Homework
• 15% Recitation Work/Recitation Quizzes
• 40% Midterm Exams (2 Tests, 20% each)
• 20% Comprehensive Final Exam

A 90% will be an A / A-, 80% will be a B / B-, 70% will be a C / C-, 60% a D. +/- Added at Instructor discretion.

Specific grading disputes for non-automated assignments should be brought to my attention within one week of return of the assignment. Appeals outside of this timeframe will not be considered.

Additional Help
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

Honor System

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

Disability Statement

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.

Calc I Syllabus - FALL 2022					
Week	Topic #	Section	Topic	Textbook problems for test practice	Comments
Week 1 Week of 8/22	1	2.1	The Tangent and Velocity Problems		
	2	1.1-1.3	Precalc review (functions, trig functions)		
	3	1.5	Precalc review (exponential functions)		
	4	1.6	Precalc review (inverse functions, logarithmic functions)		
Week 2 Week of 8/29	1	2.4 & 2.2	The Limit of a Function (limits using numerical approximations, graphs, one-sided limits)		
	2	2.2	Calculating Limits Using the Limit Laws (Limit Laws, Factoring, Rationalizing)		
	3	2.2	Calculating Limits Using the Limit Laws (Absolute Values, Sandwich Theorem)		
	4	2.3	The Precise Definition of a Limit (Limits at Finite Values)/Flexible		
Week 3 Week of 9/5			Labor Day		
	1	2.5	Continuity (Types of Discontinuities, Left/Right Continuous, Functions Continuous on Their Domains)		
	2	2.5	Continuity (Continuous Extensions, Continuity of Piecewise Functions, IVT)		
	3	2.6	Limits with Infinity; Horizontal/Vertical Asymptotes		
Week 4 Week of 9/12	1	3.1	Derivatives and Rates of Change		
	2	3.2	The Derivative as a Function & Review		
	3	3.3	Derivatives of Polynomials and Exponentials		

	4	3.3	The Product and Quotient Rules		
Week 5 Week of 9/19 **Test 1**	1	3.5	Derivatives of Trigonometric Functions		
	2	**3.6**	The Chain Rule-Intro		
	3	3.6	The Chain Rule		
	4		Test 1/Review/Flexible		
Week 6 Week of 9/26	1	3.7	Implicit Differentiation		
	2	3.9	Implicit Differentiation (Inverse Trig Derivatives)		
	3	3.8	Derivatives of Logarithmic Functions		
	4	3.8	Derivatives of Logarithmic Functions (Log Diff)		
Week 7 Week of 10/3	1	3.4	Rates of Change in the Natural and Social Sciences (Particle Motion only)		
	2	3.10	Related Rates- Intro		
	3	3.10	Related Rates		
Week 8 Week of 10/10			Fall Break		
	1	3.11	Linear Approximations and Differentials		
	2	4.7	Newton's Method/Flexible		
Week 9 Week of 10/17	1	4.2	The Mean Value Theorem		
	2	4.1	Maximum and Minimum Values, Critical Points		
	3	4.3	How Derivatives Affect the Shape of a Graph (1st Derivative Test/ Increasing & Decreasing)		
	4	4.4	How Derivatives Affect the Shape of a Graph (Concavity/POI, 2nd Derivative Test)		
Week 10 Week of 10/24 **Test 2**	1	4.4	Min/Max review		
	2	4.4	Summary of Curve Sketching **Note:** Slant asymptotes are not covered.		
	3	4.5	Indeterminate Forms and L'Hopital's Rule		
	4		Test 2/Review/Flexible		
Week 11 Week of 10/31	1	4.5	Indeterminate Forms and L'Hopital's Rule		
	2	4.6	Optimization Problems- Intro		
	3	4.6	Optimization Problems		
Week 12 Week of 11/7	1	4.8	Antiderivatives (Rules)		
	2	4.8	Antiderivatives (Differential Equations)		
	3	5.1	Areas and Distances		
	4	5.1 & 5.2	Areas and Distances (sigma notation/limits)		
Week 13	1	5.2 & 5.3	The Definite Integral		
	2	5.3	The Definite Integral- Properties		

Week of 11/14	3	5.4	The Fundamental Theorem of Calculus		
	4	5.4	Definite Integrals and the Net Change Theorem (Evaluating integrals, Total Area and Applications)		
Week of 11/21: Thanksgiving break, the one class session this week will be flexible to account for any catching up we need to do					
Week 14 Week of 11/28	1	5.5	Indefinite Integrals		
	2	5.5	The Substitution Rule- Intro		
	3	5.6	The Substitution Rule		
	4		Review/Final Part 1		
Week 15 Week of 12/5	M		Reading Day Review Session		
	T		Reading Day Review Session		
Final Exam			Part 1: During last class of Week 14. Part 2: In math testing center, time TBA		