

George Mason University
MATH113 – Analytic Geometry & Calculus I
Course Syllabus – Fall 2020

Instructor: Dr. Amy Potrzeba Macrina

Instructor Contact Information: **Email:** amacrina@gmu.edu

Office Hours: TBD via Zoom

Course Information:

SECTION # 002

Please note that this course is asynchronous. However, **there are some scheduled due dates that you are expected to meet. It is important to stay on task and manage your time wisely! I will be available to meet for office hours or appointments via Zoom.**

Email: The best way to contact me is via email. Please be sure to include your first and last name as well as course and section # in the body of the email. I will respond within 24 hours Monday – Thursday. If you email me after 3pm on Friday, you will receive a response by Monday morning.

Mathematics Prerequisite: The prerequisite for this course is successful completion (C or better) of MATH 104 or MATH 105 or the required specified score on the math placement exam.

Course Description: Functions, limits, the derivative, maximum and minimum problems, the integral, and transcendental functions. Equivalent to MAT 115 and MATH 124.

Course Objectives:

As a result of the learning experiences provided in this course, the student should be able to:

- Explain and define the limit of a function at a point, continuity at a point and differentiability at a point
- Explain the use of L'Hospital's Rule and apply it to appropriate limit problems
- State and show use of the Mean Value Theorem
- Compute the derivatives of polynomials, rational functions, & composite algebraic functions, & trigonometric functions, natural logarithmic and exponential functions
- Differentiate implicitly
- Apply the techniques of differential calculus to the problem of curve sketching
- Apply differentiating techniques to find velocity & acceleration to solve related rate & max/min problems
- Define the anti-derivative of a function & define the Riemann integral
- Interpret the relationship between antidifferentiation & differentiation
- State and apply the Fundamental Theorem of Calculus
- State the important properties of the integral
- Solve problems involving antiderivatives and areas
- State and use the Mean Value Theorem for Integrals

Textbook: Thomas' Calculus: Early Transcendentals, 14th edition, by Hass, Heil Weir.

- You need MyMathLab (MML) access.
- Access Code for MyMathLab is included with the purchase of a new book.
- A code with an ebook text can also be purchased.
- If you used this textbook before with MML access, then your access should continue, and you would not need to purchase another access code.
- You can register for free with temporary access for 14 days. At the end of the 14 days you will need to enter your purchased access code or buy one directly from the website with a credit card.
- Access Codes are different than Course IDs. You will need to purchase an access code and you will need an instructor provided Course ID.
 - **MML Course ID: macrina04885**

George Mason University
MATH113 – Analytic Geometry & Calculus I
Course Syllabus – Fall 2020

Calculator Policy: You are expected to complete the calculus sequence without the use of a calculator. Calculators will not be permitted on quizzes or exams.

Blackboard: The syllabus, class handouts, and announcements will be posted on Blackboard. Please check Blackboard regularly for any class related information (for homework – please check MML) as well as your student email, as announcements will also be sent to you via email. Grades for quizzes and exams will also be posted in the Blackboard Grade Center. Please note that your earned homework scores are given in MML. Homework grades will be transferred to the Blackboard Grade Center at the end of the semester.

Class Attendance and Participation: You are expected to attend and participate in lecture and recitation. Since this course is mainly asynchronous you are expected to manage your time each week for the required lecture assignments. Please note that for every 3 hours of lecture you should be planning on spending 6 hours outside of lecture working on the course (studying, completing homework, etc.). With a mainly asynchronous course you should be planning to spend 9 hours outside of recitation each week on this course completing the required tasks and studying.

Course Format: This course is administered online. You can be expected to spend approximately 12 hours per week on this course as it is a four-credit course. Typically, for every hour of lecture a student attends, two hours of work/studying outside of class is expected. You are expected to do as follows:

- Login to Blackboard each day and check for any new announcements as well as read and complete the tasks outlined in the weekly folder.
- Homework is required and is completed in MML. (More information provided in the homework section).
- Quizzes are required and are completed in MML except for the Syllabus Quiz and Discussion Board Posting (Quiz Grades) that are in Blackboard.
- Video Lectures are also in MML and there is one for each section. Please review the tasks within each weekly folder for assigned lectures.
- Exams are required, time and completed in MML. (More information provided in the Exams and Final Exam sections).

Grading Policy: Your course grade will be computed as a weighted average using the following percentages:

Exams 60% (3 exams each 20%) **Quizzes 10%** **Homework 5%** **Final Exam 25%**

Grading Scale: Your letter grade will be determined as follows:

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

Extra Credit: There is no extra credit. Please do not ask.

Exams: Three midterm exams will be given during the semester.

There will be **no make-up exams**. A missed exam counts as a zero unless a valid excuse from a physician or the Dean's Office is presented to your instructor and accepted. You need to contact your instructor as soon as possible regarding your extenuating circumstance for consideration of an exception.

You are not permitted to use any outside materials, resources, or electronic devices (including but not limited to non-approved calculators, mobile phones, smartwatches, etc.) on the exams. Any violation of this policy is a violation of the university's academic integrity policy.

Final Exam: The final exam is comprehensive and will be administered on **Monday December 7, 2020 in MML**. The final exam is worth 25% of your grade. The date is already set by the university, so please do not make other plans on the

George Mason University
MATH113 – Analytic Geometry & Calculus I
Course Syllabus – Fall 2020

date of the final exam such as appointments, early vacation departures, family outings, etc. Such changes are not negotiable. If a student has a conflict with another final exam, the student must contact his/her instructor at least two weeks in advance to have it resolved.

Completing Exams (including the final exam):

- Each of the three exams (exam 1, exam 2, and the final exam) will be timed exams in MML. You have 120 minutes (2 hours) to complete each exam.
- You will be required to show your work for some problems. For the show your work you can upload a file of your completed solution or type with appropriately formatted equations, notations and logical steps. The uploaded file must be a PDF, JPEG, TIFF or PNG file type. Other file formats will not be accepted.
- Once you begin the exam, the time does not stop, even if you close the assignment or sign out of MML.
- The exam availability ends at 11:59pm Eastern time regardless of where you are in your time window, so plan accordingly to allow yourself the full two hours.
- If you have provided your instructor with ODS accommodations that grant you extended time, then your instructor has adjusted your timer accordingly. However, the exam availability ends at 11:59pm Eastern regardless of where you are in your time window, so plan accordingly to get your maximum allowed time before the end of availability.
- You must complete the exam on your own.
- You will not be permitted use of any outside materials on the exams. A violation of this directive is a violation of the university's academic integrity policy.
- You will not be permitted to use a calculator or any other electronic device on the exams. A violation of this directive is a violation of the university's academic integrity policy.

Homework: Homework will be done online using MyMathLab [MML] (www.mymathlab.com). The number of attempts is unlimited. Problems can be done in any order. You do not have to do them all at once. Homework assignments are an integral part of the course. **DO NOT NEGLECT THEM!** Homework assignments must be submitted online according to the due dates on MML.

- **MML Course ID: macrina04885**
- **You need to have access to MML beginning the first day of the course.** You can enroll with free temporary access for 14 days. At the end of the free trial period you will be required to enter the purchased access code.
- Do not wait until the due date to do your HW. "Internet problems," "Broken laptops," "MML down on Friday night," etc. are not valid excuses. However, if there is a persistent MML Server problem which is longer than a day -24 hours-, then HW due time may be changed.

Quizzes: Quizzes will be administered in MML and Blackboard. Quizzes will be given weekly.

- All quizzes in MML are timed quizzes.
- There will be no make-up quizzes. If you miss a quiz you will earn a 0. If you have a documented, extenuating circumstance, please contact your instructor as soon as possible for consideration of an extension.
- In Blackboard assessments that count as quiz grades including the Syllabus Quiz, Introduction Discussion Board Posting, and FOUR Unit Discussion Board forum postings. See the discussion board in Blackboard for more details on each quiz assignment.
- Quizzes are 10% of your overall course grade.
- Your lowest one quiz grade will be dropped.

Late Assignment Policy: Late assignments will not be accepted. If you have an extenuating emergency/situation, please contact your instructor as soon as possible.

George Mason University
MATH113 – Analytic Geometry & Calculus I
Course Syllabus – Fall 2020

Inclement Weather: Check the university webpage in the event of inclement weather. In addition, please check your email and Blackboard for course specific information.

Students with Disabilities: George Mason University values diversity and inclusion; we are committed to a climate of mutual respect and full participation. My goal as your instructor is to create a learning environment that are useable, equitable, inclusive, and welcoming. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or accurate assessment or achievement, I invite you to meet with me to discuss additional strategies beyond accommodations that may be helpful to your success. If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS). Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services. Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see <https://ds.gmu.edu/>). Since accommodations may require early planning and are not provided retroactively, please contact ODS as soon as possible.

Academic Integrity: Mason shares in the tradition of an honor system that has existed in Virginia since 1842. Mason's Honor System was inaugurated in 1963 when the college was a satellite of the University of Virginia. The code is an integral part of university life. On the application for admission, students sign a statement agreeing to conform to and uphold the Honor Code. Students are responsible, therefore, for understanding the code's provisions. In the spirit of the code, a student's word is a declaration of good faith acceptable as truth in all academic matters. Cheating and attempted cheating, plagiarism, lying, and stealing in academic matters constitute Honor Code violations. To maintain an academic community according to these standards, students and faculty members must report all alleged violations to the Honor Committee. For more information and the complete policy, see <https://catalog.gmu.edu/policies/honor-code-system/>.

Use of Student Work: In compliance with the federal Family Educational Rights and Privacy Act, registration in this class is understood as permission for assignments prepared for this class to be used anonymously in the future for educational purposes.

Important Dates:

- Last day to drop with 100% Tuition Refund: Tuesday 9/8/2020
- Financial Drop Deadline (50% Tuition Refund): Tuesday 9/15/2020
- Last day to withdraw without a grade penalty: Monday 9/28/2020
- Final Exam: Monday 12/7/2020

Tips for Success:

- Be proactive about your success in the course!
- Do not procrastinate!
- Attend every class and recitation.
- Ask questions whether it is during class, recitation, office hours, at the tutoring center or via email to your instructor.
 - The Math Tutoring Center is in the Johnson Center Room 344.
- Form a study group! Working together will help you and others better understand the course material as you can work through different difficulties and offer each other clarifications on concepts.

George Mason University
MATH113 – Analytic Geometry & Calculus I
Course Syllabus – Fall 2020

Tentative Lecture Schedule:

Week	Sections Covered	Week	Sections Covered
Week #1 – Week of 8/24	1.1, 1.2, 1.3 1.5 & 1.6	Week #11 – Week of 11/2	4.6, 4.8
Week #2 – Week of 8/31	2.2, 2.4	Week #12 – Week of 11/9	Exam #3, 5.1, 5.2
Week #3 – Week of 9/7	2.5, 2.6	Week #13 – Week of 11/16	5.3, 5.4
Week #4 – Week of 9/14	3.1, 3.2 Exam #1	Week #14 – Week of 11/23	5.5, 5.6
Week #5 – Week of 9/21	3.2, 3.3, 3.4	Week #15 – Week of 11/30	Review
Week #6 – Week of 9/28	3.5, 3.6		
Week #7 – Week of 10/5	3.7, 3.10		
Week #8 – Week of 10/12	Exam #2, 3.8, 3.9, 3.11		
Week #9 – Week of 10/19	4.1, 4.2, 4.3		
Week #10 – Week of 10/26	4.4, 4.5		

- Midterm exams are on Wednesdays of the scheduled week. Therefore, the dates for the exams are as follows:
 - Exam #1: 9/16/2020
 - Exam #2: 10/14/2020
 - Exam #3: 11/11/2020

- The Final Exam is on Monday 12/7/2020.