MATH 123 001 Calculus Algebra/Trigonometry A   Fall 2018

INSTRUCTOR   Catherine Sausville   *Email:* **csausvil@gmu.edu**
                    Exploratory Hall - 4418

OFFICE HOURS   Monday   11:00am-12:00pm
                    Wednesday   11:00am-12:00pm
                                    and by appointment

TEXTBOOK   The textbook is *Thomas' Calculus: Early Transcendentals*, 14th edition, Thomas, Hass, Heil
                    and Weir. We will be using the online homework system MyMathLab which also contains the
                    ebook if you do not want a physical copy.

PREREQUISITE   You must have passed the Math Placement Exam no later than Tuesday September 4th in order
                    to add the course.

MATERIAL TO BE   Generally, Chapters 1-3 in the textbook, including: Algebra review, Trigonometry review, Func-
COVERED   tion, Limits, and Derivatives.
                    The pace of the course is very fast. A comfortable working knowledge of virtually all Appendix
                    A.1 material is assumed. The demands of the course will require a serious time commitment, in
                    terms of both class attendance and homework time outside of class.

LEARNING GOALS   **Learning Goals and Objectives for the Math 123 & Math 124 Sequence**
AND OUTCOMES
    I. Students are able to interpret quantitative information (i.e., formulas, graphs, tables, models, and schematics) and draw inferences from them.

        (a) Students will understand how functions are represented by graphs.

        (b) Students will sketch graphs of polynomial, exponential and trigonometric functions, and interpret graph parameters.

        (c) Students will understand the relationship between the graph of a function and its inverse.

        (d) Students will identify the graph of the derivative of a function from the graph of the function itself, and do the same for the antiderivative of a function.

    II. 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.

        (a) Students will find the rate-of-change of a function (e.g., velocity) from the function itself (e.g., position) and find the function (e.g. position) from its derivative (e.g. velocity)

        (b) Students will find relative maxima and minima of a function (e.g., maximize profit or area)

        (c) Students will solve for the zeros of the derivative of a function

        (d) Students will evaluate areas under curves and compute the net change in a function between two values of the independent variable.

    III. Students are able to evaluate logical arguments using quantitative reasoning.

        (a) Students will interpret quantitative solutions to problems for plausibility and accuracy

        (b) Students will understand how to use various formulas for computing derivatives, and know why these formulas hold.

IV. Students are able to communicate and present quantitative results effectively.

   (a) Student exams will be graded in part on clarity of presentation of work and not just on the final answer.

   (b) Students may from time to time be asked to explain concepts qualitatively on exams and quizzes.

   (c) If students are involved in group work they will be required to explain concepts to peers.

LEARNING
ASSISTANT
We are very lucky to have been assigned a Learning Assistant (LA) for this semester. Her name is **Emily Engdahl** and her email is **eengdahl@gmu.edu**. She will be available weekly both in class and outside of class to help with questions and problems. She will also be assisting me with Orals, which are kind of like guided study sessions. These will be optional but I would strongly recommend attending at least once early in the semester to see if you think you would benefit from them.

CALCULATORS
Because this course is designed to be half of Math 113, one of its primary goals is to help students acquire competence with basic algebraic and functional concepts and relationships. Accordingly, we will use calculators sparingly. I encourage you to attempt all homework problems without calculators, though some questions may require one. With rare exceptions, **use of calculators will not be permitted during tests or the final exam.** In the event that calculators are permitted, absolutely no sharing of calculators or graphing calculators are allowed.

MYMATHLAB
MyMathLab is a powerful online, homework, tutorial and assessment system that accompanies your new textbook. Students can take assessments, and receive personalized study plans based on their results. The study plan diagnoses weaknesses and links students to tutorial exercises for objectives they need to study. In many cases students can also access video clips, PowerPoint presentations, and other animations for each section and from selected exercises.

MyMathLab is NOT a program operated by GMU. If you are experiencing technical difficulties using the program, then you can email or chat with Customer Support directly through the Pearson Education Customer Service website. Go to 247pearsoned.custhelp.com for more information. Help is available 24 hours a day, seven days a week. You could also call the Pearson Customer Service and Technical Support number at 800-677-6337. DO NOT CALL THE GMU HELP DESK OR YOUR PROFESSOR!

REQUIRED
TECHNOLOGY
We will be using the online learning system MyMathLab. To sign up, please go to the website mymason.gmu.edu and click sign-in using your GMU NetID. Click the **Math 123 001 Fall 2018** course link. On the left hand side there is a link for **MyMathLab**. In there click the link for the **MyLab/Mastering Course Home** and follow the instructions.

You are required to have signed up for MyMathLab by class on Tuesday September 4th.

This course uses BlackBoard as the learning management system. You will need a browser and operating system that are listed compatible or certified with the BlackBoard version available on the myMason Portal. Log in to MyMason at mymason.gmu.edu to access this course.

COURSE GRADES
Your final grade will be calculated as follows:

Homework	15%
Quizzes and In-Class	15%
Tests (15% each)	45%
Final Exam	25%

HOMEWORK &
QUIZZES

Homework assignments will be listed on MyMathLab. The homework is broken into each section, however multiple sections may be due each week. Please pay attention to the due dates. A list of additional practice problems from the text is stated on the last page of the syllabus.

Homework will be available on Monday at the beginning of the week and will be due on Thursdays before class at 8:00am and Sundays at 11:59pm.. For full credit you must submit your solutions to the homework during this designated time period. Homework submitted late will receive a 25% deduction.

Homework assignments are provided with a help menu which includes links to things like videos, practice problems, similar examples, and the link to the textbook section pertaining to the material. You will have 3 chances to complete each homework problem, so if you miss a question please take advantage of these help menus. Two homework assignments will be dropped.

Quizzes will cover material from the homework as well as lecture and will be similar to homework problems. In class quizzes will be given on Thursdays. **If you are not in class on the day a quiz is given there will be no makeup for the quiz, no exceptions.** No quizzes will be dropped and quizzes will not be given on weeks where there is a test scheduled.

There will be some sort of graded assignment in every class. Whether it is a quiz, test or worksheet; you are expected to be in class and participating every day. Makeups will not be given for assignments that are missed.

TESTS & FINAL
EXAM

There are 3 tests scheduled in this class. Tests will cover material from the homework as well as the lecture, however test questions will usually be more challenging that homework and quiz questions.

It is expected that students will take the test in class at the scheduled time. If you are unable to be in class on the day of a test you must ask me beforehand (by email only) so that I can determine if your situation warrants a make-up test. **Do not assume you will be given a make-up unless you get confirmation from me.** You must be able to validate your excuse with documentation or you will not be allowed a make-up. The make-up test will be different and more difficult than the in-class test. You must make up the test by the next class period to receive full credit.

No collaboration is allowed on exams or quizzes. 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 George Mason Honor Code. Once you receive an exam or quiz, you are not allowed to leave the exam room until you are ready to turn the exam in.

Below is the tentative schedule of the tests, any changes will be announced in class or on Blackboard. Exact material to be covered on the tests will be determined the class before the test. The final exam will be cumulative.

Test 1   Thursday, September 20
Test 2   Thursday, October 25
Test 2   Thursday, November 29
Final Exam   Thursday, December 13th (7:30am-10:15am)

These dates are tentative and subject to change.

HONOR CODE

THIS IS IMPORTANT. It is expected that each student in this class will conduct himself or herself within the guidelines of the Honor Code. Among other things, this means that sharing information of any kind about exams or quizzes (either before or during the exam) will result, at a minimum, in a grade of zero for all parties involved. All work must be your own and

submitted by you as the student registered for the class. The right is reserved to check a picture identification during any of the exams. Internet capable devices and other electronics are not allowed to be used or within your sight during exams. This includes but is not limited to calculators, computers, cell phones, tablets and smart watches. Any of these must be turned off and put away BEFORE an exam or quiz starts. Calculators may be used on the homework if necessary. See academicintegrity.gmu.edu for a copy of the Honor Code.

CELL PHONES AND COMPUTERS

I expect to receive the same level of respect that I give to you. This means that cell phones and computers are not to be used during class. Your cell phone should be on silent or vibrate during lecture and I should not see them at all during tests or quizzes. If I notice you using a cell phone during a test or quiz then I will assume that it is an Honor Code violation and take appropriate action. This could result in you failing the assignment, failing the class or being suspended from the university.

OBTAINING HELP

There are many outlets available for you to get help in this class. I understand that the pace of the class is very quick so I will try to be available as much as I can to students. In addition to my set weekly office hours, I am very happy to schedule appointments.**The Math Tutoring Center, is in the Johnson Center room 344 and offers free tutoring to Math 105 students.** I highly recommend using it. The schedule of the tutoring center can be found at http://math.gmu.edu/tutorcenter.htm.

ACCOMMODATIONS

If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Services. All academic accommodations must be arranged through that office. Office of Disability Services Student Union Building I (SUB I), Room 4205 Phone: 703.993.2474

E-MAIL & BLACKBOARD

E-mail is an effective form of communication outside the classroom. I frequently send announcements through email so make sure that you activate and check your GMU email account regularly. All students are required to use their George Mason email for communication and for MyMathLab. Please put Math 105 in the subject field anytime you send me an e-mail. If you want to discuss your grade via e-mail it *must* be done using your GMU e-mail account. I will be using Blackboard 9.1 in this class to post class announcements, grades and other important information pertaining to the class. You can access this by going to mymason.gmu.edu and logging in using your NetID.

UNSCHEDULED AND LATE CLOSINGS

If the university has an unscheduled closing-because of weather or some other unforseen occurrence you should assume that we will pick up with the schedule where we left off. In particular, if a test was scheduled for a day in which school was canceled or an assignment was due that day you should assume that the test will be given or the assignment will be collected the next time class meets. If the university has a late opening on a class day we will begin class at the time the university opens. A test scheduled for a day the university opens late will be postponed until the next class day. Make sure you check your GMU e-mail account for any announcements.