

**George Mason University**  
**MATH 123 002 – Calculus Algebra/Trigonometry A**  
**Course Syllabus – Fall 2021**  
**Location: Horizon Hall 1010 M/W 10:30-11:45am**

**Instructor:** Dr. Timothee Bryan

**Email:** tbryan5@gmu.edu

**Office Hours:** Exploratory Hall 4405 T/R 10:30am – 1:15pm and by appointment

**Email:** Please be sure to include your first and last name as well as course and section # in the body of the email.

**Course Objectives:** 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.

**Course Materials:** *Thomas' Calculus (Early Transcendentals)* by Hass, Heil and Weir (fourteenth edition, Pearson publisher) with **MyMathLab**. ISBN: 9780134764528

- 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: bryan47592**

**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:** It is my firm belief that active student participation improves the course outcomes for both you and me. To encourage your attendance and participation, you will receive participation “cards” throughout the semester for activities such as asking good questions, contributing meaningfully, and completing in-class problems.

- Up to once per class period, you can receive a participation card which you will put your name and the date on and return to me at the end of class. Receiving 20 cards throughout the semester will be considered 100% participation while receiving 19 cards will be considered 95% participation, etc.
- Cards must be turned in on the day they are earned and will not be accepted late.
- You will be able to track the number of cards you've earned on the course Blackboard page.

**Extra Credit:** There is no extra credit. Please do not ask. However,...if you earn 100% participation throughout the semester, I will replace your lowest in-class exam score with a better final exam score.

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**Calculator Policy:** You are expected to complete the calculus sequence without the use of a calculator. While there are times we will use calculators for homework problems, you are encouraged to use them sparingly. Calculators will not be permitted on exams.

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

- 15% Test 1, Wednesday, September 15
- 15% Test 2, Wednesday, October 20
- 15% Test 3, Monday, November 8
- 25% Final Exam, Wednesday, December 8 10:30am-1:15pm
- 15% Homework (MyMathLab assignments)
- 15% Participation (as described above)

**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     |

**Exams:** 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 **Wednesday, December 8, 2021**. 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 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.

**Homework:** Homework will be done online using MyMathLab [MML] ([www.mymathlab.com](http://www.mymathlab.com)). 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: bryan47592**
- **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.

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

**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.

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**Tentative Lecture Schedule:**

| <b>Week</b>              | <b>Sections Covered</b> | <b>Topic</b>   |
|--------------------------|-------------------------|--|
| Week #1 – Week of 8/24   | Syllabus, Review, 1.1   | Functions and their Graphs (no piecewise functions), Unit Circle   |
| Week #2 – Week of 8/31   | 1.2                     | Combining Functions – Shifting and Scaling, Trig Functions, Exponent Rules (Out of class)                              |
| Week #3 – Week of 9/7    | 1.3, 1.5, 1.6           | Solving Trig Functions, Exponential and Log Functions (Suggested more practice needed)                                 |
| Week #4 – Week of 9/14   | 1.6, <b>Test 1</b>      | Inverse Functions, Log Functions, Arc Trig Functions   |
| Week #5 – Week of 9/21   | 2.2                     | More on Arc Trig Functions (Graphs), Limit of a Function (Intuitive Definition)  |
| Week #6 – Week of 9/28   | 2.2, 2.3                | One- and Two-Sided Limits, Piecewise Functions, Precise Definition of a Limit  |
| Week #7 – Week of 10/5   | 2.2, 2.5                | Limit Laws, Limits based on Operators, Limits based on Function Classification, Continuity, Limits Based on Continuity |
| Week #8 – Week of 10/12  | 2.6                     | Discontinuities – Vases and holes (Mostly Trig Stuff here)   |
| Week #9 – Week of 10/19  | 2.6, <b>Test 2</b>      | Limits at Infinity (End Behavior), Power Functions   |
| Week #10 – Week of 10/26 | 3.1, 3.2                | Tangent Lines and the Derivative at a Point, Derivatives as a Functions  |
| Week #11 – Week of 11/2  | 3.3                     | Differentiation Rules, Derivatives of Log Functions  |
| Week #12 – Week of 11/9  | 3.4, 3.6                | Derivative as a Rate of Change, The Chain Rule (Decompositions)  |
| Week #13 – Week of 11/16 | 3.5, 3.6                | Derivatives of Trig Functions, The Chain Rule (Really hard problems)   |
| Week #14 – Week of 11/23 | 3.7                     | Implicit Differentiation   |
| Week #15 – Week of 11/30 | <b>Test 3, Review</b>   |  |
| Week #16 – Week of 12/7  | <b>Final Exam</b>       |  |