Instructor: Samah Mahmoud
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Office Hours: MW 6:30-7:10pm & Friday 12:00-1:40pm Exploratory Hall
Textbook: Thomas Calculus: Early Transcendentals, Fourteenth Edition, by Hass, Heil, & Weir

Prerequisites: Sufficient recall of algebra and trigonometry is required. Successful completion of Math Placement Test or a grade of C or better in MATH 105.

Course Goals: To understand and be able to make use of the concepts of limits, derivatives and integrals of functions (e.g. polynomial, rational, exponential, logarithmic, trigonometric) and to understand the relationships between limits, derivatives and integrals**.**

 Course Content: We will cover chapters 2-5 and the start of chapter 6. (Knowledge of chapter 1 is also required.) Topics include exponential, logarithmic and inverse trigonometric functions, limits, differentiation and applications, basic integration.

Expectations: • You will read the book carefully! • You will do all assigned homework
problems, whether online or on paper. • You will satisfy yourself that you can do all the suggested book problems. Try to do them all. As you should know, math is best learned by doing. • If you have any questions, ideas, or comments, please speak up • You may be required to present problems and such at the board during the recitation sections. • You will come to class every time; there will often be quizzes, and you will get a 0 grade for any that you do not show up to. • You will not use your cell phones or portable electronics during class, with the exception of the book itself (if it is in e-book format)! These devices, while in vogue, are distracting and disruptive, and I may expel people from the classroom if I see this sort of behavior. • If you are a student with a disability and you need academic accommodations, please see me and contact the Office of Disability Resources at 703 993 2474. All academic accommodations must be arranged through that office.

Exams and Quizzes: There will be three in-class exams and a final exam. Attendance
on exam days is especially important! There will also be weekly quizzes given during recitation. If you cannot make it to class when the quiz is given, you will not be able to receive credit for the quiz. There are no make up for missed exams or quizzes unless previously discussed and excused with the instructor. If one exam is missed and (1) a valid, documented excuse is given in writing to the instructor at the time of the absence and (2) the student provides sufficient evidence to the instructor that he/she is keeping up with the topics in the course, the final exam score will count in place of the missed exam. The instructor will determine whether an excuse is valid. Without a valid documented excuse given at the time of the exam, a missed exam will count as a zero.

Ungraded Homework: Problem sets from the sections in the textbook will be assigned
regularly. Although these will not be collected, success in this class depends strongly on

completing and understanding these problems. Working together on ungraded homework is encouraged but each student is ultimately responsible for understanding the material.

Grading Policy:

Quizzes = 20%
Three Exams = 60%
Final Exam = 20%

The lowest exam grade will be replaced with the final exam grade if the score is higher. The lowest two quizzes will also be dropped.

Extra Help: Get to know each other; you will be each other's resources. Also, do not hesitate to come to my office or Peter's during office hours or by appointment to discuss a homework problem or any aspect of the course. Attendance and Class Participation: Students are expected to attend classes regularly. Please let me and Peter know ahead of time if you plan to be absent and why. There is also a tutoring center in the 3rd floor of the Johnson Center Free for all mason students.

Academic Integrity: GMU is an Honor Code university; please see the Office for Academic Integrity for a full description of the code and the honor committee process. The principle of academic integrity is taken very seriously and violations are treated gravely. What does academic integrity mean in this course? Essentially this: when you are responsible for a task, you will perform that task. When you rely on someone else's work in an aspect of the performance of that task, you will give full credit in the proper, accepted form.

Recitations: There is one hour of recitation with Peter Rizzi each Tuesday. Check which recitation section you are registered for. Attendance there is also mandatory, as Peter may give quizzes and tasks to be done on-site.

Final Exam: The final exam will be an in-class cumulative exam and must be taken at the scheduled time. Exceptions are allowed only with a Dean's permission, by University rules.

Calculators/Phones/Etc.: Calculators will be treated as devices to assist in learning and understanding calculus but not as a replacement for knowing and remembering calculus and basic arithmetic. No calculators will be allowed for use on either quizzes or exams. The term 2 'calculators' here refers to any device such as standard scientific and graphing calculators but also smartphones, ipads, laptops, etc. No such devices will be allowed on your table/desk while taking quizzes and exams. Plan to turn off and put away all mobile electronic devices during quizzes and exams – accessing these devices between the time you receive your exam and the time you turn in your exam constitutes an honor code violation.

Students as Scholars initiative: Math 113 is designated as a Discovery of Scholarship course within the Students as Scholars initiative (for general information on this initiative, go to http: //oscar.gmu.edu/.) This means that in this course you will be engaged in meaningful mathematics experiences that emphasize how mathematicians figured out the key

results of calculus. You will also be solving many problems and then reflecting on the problem solving process. Explaining your reasoning is a crucial part of your intellectual growth in mathematics and will be done in class, in recitation, and in optional oral reviews before exams. As well, some short introductions to other topics of research in mathematics will be presented. As a result, you should become much more familiar with the nature of mathematical knowledge, how such knowledge is created, and with the common vocabulary and concepts used to convey such knowledge.

Tentative Schedule

Dates	Sections	Assignment
August 27th/29th	Chapter: 1.1–1.6	
September 3rd/5th	Chapter 2.1 – 2.3	
September 10th/12th	Chapter 2.4 – 2.6	
September 17th/19th	**Review for Exam/ Exam1**	
September 24th/25th	Chapter 3.1 – 3.3	
October 1st/3rd	Chapter 3.4 – 3.6	
October 8th/10th	Chapter 3.7 – 3.9	
October 15th/17th	Chapter 3.10 – 3.11	
October 22nd/24th	**Review for Exam/ Exam 2**	
October 29th/31st	Chapter 4.1 – 4.3	
November 5th/7th	Chapter 4.4 – 4.6	
November 12th/14th	Chapter 4.7 – 4.8	
November 19th/21st	Chapter 5.1 – 5.3	
November 26th/28th	**Review for Exam/ Exam 3**	
December 3rd/5th	Chapter 5.3 – 5.6 **Final Exam Review**	
December 10-11	**Reading Days**	
December 12	**Final Exam**	

Homework that is not to be handed in:

(1.1): 1-10,13,15-22,23,25,28,29,37-40,47-50,69,70,76

(1.2): 1-8,11,15,16,17,18,23,24,25,26,37-40,49,52,59-62,69,71,73

(1.3): 13-16,31,32,35-38,55

(1.4): 1,2,17,19,25,27,29

(1.5): 1,2,3,5,7,9,10,11-20,21-24

(1.6): 1-6,7,8,11-14,19,21,29,31,41,49,51,55,69,73

(2.1): 1,2,4,5,7,9,25

(2.2): 1-4,7,8,11,13,21,23-26,31,35,37,43-46

(2.3): 1,2,7,8,15,16,31,32

(2.4): 1-4,6,7,13,14,15,16,23,25,27

(2.5): 1-10,13,15,17,33,34,48,49,50,55,56

(2.6): 1-8,9,10,13,15,17,19,21,23,25,35,37-44,49,50,63,64,65,67,75,76

(3.1): 1,2,5,9,11,17,23

(3.2): 2,3,9,13,27-31,35,45,47,49

(3.3): 1-17(odd), 21,23,31,34,35,41,43,53,54,76,77,79

(3.4): 1,2,7,12,13,17,32

(3.5): 1-8,17,23,24,35,38

(3.6): 1-21(odd),25,31,35,43,45,49,59,69,75,77,81,87,89

(3.7): 1-12,33,34

(3.8): 1-4,11-21(odd),41,43,47,67-77(odd)

(3.9): 1,3,5,9,11,13-16,21-24,33,34

(3.10): 1-6,13,14,27,33,39

(3.11): 1-3,7-10,17,19,20,39,41

(4.1): 1-6,11-14,15,17,18,21-31(odd),45,47,49,65

(4.2): 1-6,9,14,17,52

(4.3): 1-7(odd),15,16,19-35(odd),67,68,71

(4.4): 1,3,5,7,9-23(odd),41,43,45,59,61,63,81,83,85,87,89,109,110,111,112

(4.5): 1-6,7,9,11,13,15,17,19,35,41,75,76

(4.6): 1,2,9,10,15,44,64

(4.7): 1,3,10,11

(4.8): 1-23(odd),25-53(odd),91-99(odd),115-118

(5.1): 1-8

(5.2): 1-15(odd),19,21,23,25,29

(5.3): 1-7(odd),9,15,17,19

(5.4): 1-13(odd),35-38,39,41,43,57,59,61

(5.5): 1-7

(5.6): 1-13(odd),49,51