

Time/Location:	MW 1:30pm-3:20pm, Peterson Hall 2411
Instructor:	Ahsan H. Chowdhury (achowdh6@gmu.edu)
Office:	Exploratory Hall 4407
Textbook:	<i>Thomas' Calculus: Early Transcendentals, 14th edition, by Hass, Heil, Weir.</i>
Prerequisite:	The prerequisite is Math 113 (minimum grade of C) or an equivalent course.
Office Hours:	MW 11:45pm-12:45pm R 12:30pm-1:30pm *Other meeting times are available by appointment.

Attendance

Class attendance will be taken daily 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.

Homework/Quizzes

Both homework problems and quizzes will contribute to this part of your grade. There may also be extra credit assignments that I will spread throughout the semester that can also contribute to this portion of your grade only. Extra credit given this way cannot result in earning more than 100% on the homework/quiz portion of students' grade.

Homework assignment due dates will be posted on Canvas and announced in class. 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. In some cases, corrections on assignments and quizzes will be allowed.

Assignments are considered late after their due dates. Late assignments are only accepted if they meet the conditions in the Make-Up policy.

Tests

There will be 3 midterm exams and a comprehensive final exam. **Each midterm exam will take place during class time on the dates listed below.** It is possible for me to allow test corrections on midterm exams, for at most half the points you lost back, but I will decide that individually for each midterm exam.

	Test Date (Tentative)
Test 1	Week 5
Test 2	Week 9
Test 3	Week 14
Final Exam	Wednesday, 5/11/22, 1:30pm-4:15pm

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:

- 40% Homework/Quizzes (20% each)
- 45% Midterm Exams (3 Tests) (15% each)
- 15% Comprehensive Final Exam

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

Specific grading disputes 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.

MATH 116 Syllabus Spring -Tentative						
Week		Section	Topic	Textbook Problems for HW (TURN in a PDF under the appropriate assignment under the 'Learn Here: Weekly Lessons' tab)	Quiz on	
Week 1	Jan 24	1	5.5/5.6	Intro to Course / Substitution Rule (Review)	5.5 (15,35,43,45,59)	
		2	5.1-5.2	The Definite Integral (Review)	Riemann Sum review: https://activecalculus.org/single/sec-4-2-Riemann.html (Read the section, answer the activities, and the problems at the end. Turn in your work with the rest of your work as usual) 5.1 (9,13-not part c), 5.2 (1-15 odd, 43- just set up the Riemann sum, don't take the limit)	
		3	5.6	Areas Between Curves	5.6 (23, 42, 59,79)	Quiz
		4	6.1	Volumes (Known Cross-Sections)	Wrap up problems from 5.6 slides (slide 14: 5a,b,c,d)	
Week 2	Jan 31	1	6.1b	Volumes (Disk/Washer)	6.1 (3,5,7, 23,35, 39,55, in addition to all of these, draw and label a typical cross section first, find the volume of the cross section, then answer the problem)	
		2	6.2	Volumes by Cylindrical Shells	6.2 (9, 17, 23, 25, 29, 33 draw and label a typical cross section first, find the volume of the cross section, then answer the problem)	
		3	6.5	Work (Springs/Ropes)		Quiz
		4	6.5	Work (Pumping liquids)		
Week 3	Feb 7	1	6.5	Work / Flexible	6.5 (9,11 for these, figure out an equation for a 'slice' of work for a small section and then answer the question as asked in the text; 7)	
		2	8.2a	Integration by Parts	8.2 (13,21,29-may require multiple lbP,35,37,45,49)	Quiz
		3	8.2b	Integration by Parts		
Week 4	Feb 14	1	8.3	Trigonometric Integrals	8.3 (5,11,19, 33,43,45)	
		2	Review			
		3	8.4a	Trigonometric Substitution	8.4 (5,11,15,25,39,43,49)	Quiz
		4	8.4b	Trigonometric Substitution		
Week 5	Feb 21	1	TEST 1	Includes material through Section 8.3		
		2	8.5a	Integration of Rational Functions by Partial Fractions	8.5 (5,7,13,15,17)	
		3	8.5b	Integration of Rational Functions by Partial Fractions	8.5 (21,23)	
		4		Strategy for Integration	Chapter 8 practice exercises (69,79,81,83,95,103)	
Week 6	Feb 28	1	8.7	Approximate Integration		
		2		Income Inequality and the Gini Index	Gini index worksheet	
		3	6.6	Applications to Physics and Engineering (Centers of Mass)	6.6 (7,9,11)	Quiz
		4	4.5a	Indeterminate Forms and L'Hospital's Rule	4.5 (31-45 odd-moved to next hw)	
Week 7	Mar 7	1	4.5b	Indeterminate Forms and L'Hospital's Rule	4.5 (31-45 odd (39 is a crazy problem and is not required but is good practice), 53-63 odd, 81)	
		2	8.8a	Improper Integrals	8.8 (3,5,7,11,17,)	
		3	8.8b	Improper Integrals	8.8 (35,37,39,43)	Quiz
		4	8.9	Probability		
Spring Break						
Week 8	Mar 21	1	8.9	Probability	8.9 (5,7,9,15,19,21)	
		2	10.1a	Intro to Convergence and Divergence Sequences		
		3	10.1b 10.2a	Sequences Series	10.1 (1,21,23,31)	Quiz
		4	Flexible	Flexible		
Week 9	Mar 28	1	TEST 2	Includes material through Section 8.9		
		2	10.2b	Series	10.1 (35,41,43,47,53,69) 10.2 (3,15,31,33,65,79-can skip this last one if you can't figure it out)	
		3	10.3	The Integral Test	10.3 (5,9,19,33,35)	
		4	10.4a	The Comparison Tests		
Week 10	Apr 4	1	10.4b	The Comparison Tests	10.4 (5,9,15,21,29,37,41)	
		2	10.6a	Alternating Series and Absolute Convergence	10.6 (3,5,7,9)	

		3	10.6b,10.5a	Alternating Series and Absolute Convergence		Quiz
		4	10.5a	Ratio and Root Tests	10.5(3,5,7,27,37)	
Week 11	Apr 11	1	10.5b	Ratio and Root Tests	10.5(11,13,19,23,31,35)	
		2		Strategy for Testing Series		
		3	10.7a	Power Series	10.7 (5,9,25,27,37)	Quiz
		4	10.7b	Representations of Functions as Power Series	10.7 (53,55ab,57ab,49)	
Week 12	Apr 18	1	10.7c	Representations of Functions as Power Series		
		2	10.8,10.9	Taylor and Maclaurin Series	10.8 (3,13,25,29)	
		3	10.8,10.9	Taylor and Maclaurin Series	10.9 (5,7,11,15,19,21,23,39,45)	Quiz
		4	10.10a	Applications of Taylor Polynomials		
Week 13	Apr 25	1	10.10b	Applications of Taylor Polynomials	10.10 (19-refer to ex3 of the text for help,31,33,35,43,47,49)	
		2	11.1	Curves Defined by Parametric Equations	11.1 (3,11,15,19,23)	
		3	11.1/11.2	Calculus with parametric curves	11.2 (7,9,11,25,27)	Quiz
		4	Review			
Week 14	May 2	1	TEST 3	Includes material through Section 10.10		
		2	11.3a	Polar Coordinates	11.3 (5,7,13,15,17,23)	
		3	11.3b, 11.4	Polar Coordinates	11.3 (31,37,39,57,61,63), 11.4 (17,19)	
		4	Review			
Week 15	May 9	1	Review			
		2	Review			
11-May		W	FINAL EXAM	Cumulative Final Exam 1:30pm-4:15pm		