

MATH 151 - Calculus 1

Spring 2015, 4 Credits

Course Information:

Class Times:

Lecture: Sections 11,12,13,14,15

Tuesdays and Thursdays, 5:30 - 6:45pm, Lecture Hall 1 101

Discussions:

Joshua Hudson

12 — Tuesdays and Thursdays, 7:10 - 8:00pm SOND 112

14 — Tuesdays and Thursdays, 4:00 - 4:50pm SOND 113

Preston Donovan

13 — Tuesdays and Thursdays, 7:10 - 8:00pm SOND 202

15 — Tuesdays and Thursdays, 4:00 - 4:50pm SOND 114

Instructor: Dr Cheyne Homberger

Office: MP 239

Email: cheyneh@umbc.edu

Office Hours: Tuesdays and Thursdays 4:45 - 5:20pm, 6:50 - 7:25pm

Course Description: This course will introduce the student to differential and integral single-variable calculus, from the concept of limits up through the fundamental theorem of calculus. Students will attend two lectures and two discussions each week.

Textbook: *Calculus, Early Transcendentals* by James Stewart, 7th edition, Thomson/Brooks Cole Publishing, 2010. A personal Webassign code is also required for your online homework. This code comes bundled with a new text or can be purchased separately online at the publishers at Webassign.com or in the book store. If the enhanced code is purchased, an e-book is already included online and students can decide if they want the hard copy as well as the text online. You do not need a class key, you will be linked to Webassign through BlackBoard.

Testing and Grading: The usual 90-80-70-60 % grading system will be used in this course. Time spent outside of class on this course will be between 12 and 15 hours per week - MINIMUM!

Points will be allocated as follows:

Best 10 homeworks — 10 points each	= 100 points
Best 8 quizzes — 25 points each	= 200 points
3 Exams — 100 points each	= 300 points
Final Exam — 200 points	= 200 points
TOTAL	= 800 points

Exams will be given during lecture and quizzes will be given during discussions, according to the schedule below.

Quiz 0 will be taken by all students taking Math 151. See Blackboard for details — you have received emails regarding Quiz 0. You must read them carefully and follow the instructions. I will not be answering questions about the topics covered in this quiz. This will be counted as one of your quizzes, but cannot be dropped.

Make-up Policy: There will be no make-ups, but there will be drops to compensate for this. The lowest three quizzes will be dropped. Make-up exams will be given at my discretion — you must notify me by email in advance of the exam date if you are unable to attend. Calculators are not required for this course are not allowed on Quizzes and Exams, but may be used on homework.

Academic Conduct and Policy: By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal.

To read the full Student Academic Conduct Policy, consult the UMBC Student Handbook, the Faculty Handbook, or the UMBC Policies section of the UMBC Directory.

Course Schedule (approximate):

Date	Sections	Topics Covered	Quizzes
T 1/27	2.1	Introduction, Tangents and Velocities	
R 1/29	2.2, 2.3	Limits	
T 2/3	2.4	Precise definition of limits	Quiz 1 on 2.1-2.3
R 2/5	2.5, 2.6	Continuity, limits at infinity	
T 2/10	2.7, 2.8	Derivatives as rates of change and as functions	Quiz 2 on 2.4-2.6
R 2/12	3.1, 3.2	Derivative formulas, product and quotient rules	
T 2/17	3.2, 3.3	Derivatives of trigonometric functions	Quiz 3 on 2.7-3.2
R 2/19	3.3	Review	
T 2/24		EXAM 1 on 2.1 - 3.3	
R 2/26	3.4	Chain Rule	
T 3/3	3.5, 3.6	Implicit differentiation, log differentiation	Quiz 4 on 3.4
R 3/5	3.9	Related rates	
T 3/10	3.10, 3.11	Linear approximations, hyperbolic functions	Quiz 5 on 3.5 - 3.9
R 3/12	4.1	Max and mins	
3/15 - 3/22: SPRING BREAK			
T 3/24	4.2, 4.3	Mean value theorem, derivatives and graphs	Quiz 6 on 3.10-4.1
R 3/26	4.3	Review	
T 3/31		EXAM 2 on 3.4 - 4.3	
R 4/2	4.4	L'Hôpital's Rule	
T 4/7	4.5	Curve sketching	Quiz 7 on 4.4
R 4/9	4.7	Optimization	
T 4/14	4.8, 4.9	Newton's method, antiderivatives	Quiz 8 on 4.5, 4.7
R 4/16	5.1, 5.2	Areas and distances, the definite integral	
T 4/21	5.3	The Fundamental Theorem of Calculus	Quiz 9 on 4.8 - 5.2
R 4/23		Review	
T 4/28		EXAM 3 on 4.4 - 5.3	
R 4/30	5.4	Indefinite integrals	
T 5/5	5.5	Substitution	Quiz 10 on 5.4
R 5/7		Integration review	
T 5/12		Last day of class — review	
FINAL EXAM — TBA			