Course Guide Calculus I: Spring 2024:

	Topic	My notes		Assignment due
M: 1-15	Quiz 1 & What is Calculus ?	Chapter 1		
T: 1-16	Real # Topology	Chapter 1		
W: 1-17	Algebra	Chapter 1		
TH: 1-18	Sign-Charts, Local Inverses	Chapter 1		
F: 1-19	Trigonometry	Chapter 1		
M: 1:22	Quiz 2 / Homework Discussion			
T: 1-23	Limit Definition & Proofs	Chapter 2		Mission 1
W: 1-24	Limit Laws & Calculation	Chapter 2		
TH: 1-25	Limit Calculation	Chapter 2		
F: 1-26	Limit Laws & Squeeze	Chapter 2		
M: 1-29	Quiz 3 / Homework Discussion			
T: 1-30	Continuity	Chapter 2		Mission 2
W: 1-31	Squeeze & IVT	Chapter 2		
TH: 2-1	Secants & Tangents	Chapter 3		
F: 2-2	Derivative function	Chapter 3		
M: 2-5	Quiz 4 / Homework Discussion			
T: 2-6	Math Battle 1			Mission 3
W: 2-7	Questions ?			
TH: 2-8	TEST I			
F: 2-9	d/dx basics	Chapter 3		
M: 2-12	Exponential, sine, cosine	Chapter 3		
T: 2-13	Product & Quotient rules	Chapter 3		
W: 2-14	Chain rule and more	Chapter 3		
TH: 2-15	Implicit differentiation	Chapter 3		
F: 2-16	Inverse Trig fncts	Chapter 3		
M: 2-19	Quiz 5 / Homework Discussion			
T: 2-20	Logarithmic differentiation	Chapter 3		Mission 4
W: 2-21	Further differentiation	Chapter 3		
TH: 2-22	Related rates	Chapter 3		
F: 2-23	Linearization & Newton's Method	Chapter 4		
M: 2-26	Quiz 6 / Homework Discussion			
T: 2-27	Math Battle 2			Mission 5
W: 2-28	Questions ?			
TH: 2-29	TEST II			

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	Topic	My notes		Assignment due
F: 3-1	Fermat, Rolles, MVT'	Chapter 4		
M: 3-4	Fermat, Rolles, MVT'	Chapter 4		
T: 3-5	Geometry of f '	Chapter 5		
W: 3-6	Geometry of f ''	Chapter 5		
TH: 3-7	Polynomial Approx. & Taylor's Thm	Chapter 5		
F: 3-8	Closed Interval Method	Chapter 5		
	SPRING BREAK 3-11 to 3-15			
M: 3-18	Quiz 7 / Homework Discussion			
T: 3-19	Optimization	Chapter 5		Mission 6
W: 3-20	Optimization	Chapter 5		
TH: 3-21	Limits at infinity	Chapter 5		
F: 3-22	L'Hopital's Rule	Chapter 5		
M: 3-25	L'Hopital's Rule	Chapter 5		
T: 3-26	Quiz 8 / Homework Discussion			
W: 3-27	Math Battle 3			Mission 7
TH: 3-28	Test III			
F: 3-29	Antiderivatives and IVPs	Chapter 6		
M: 4-1	EASTER MONDAY			
T: 4-2	Properties of Definite Integrals	Chapter 6		
W: 4-3	FTC motivated & proof	Chapter 6		
TH: 4-3	FTC motivated & proof	Chapter 6		
F: 4-4	FTC examples	Chapter 6		
M: 4-8	Quiz 9 / Homework Discussion	Chapter 6		
T: 4-9	u-substitution	Chapter 6		Mission 8
W: 4-10	u-substitution with bounds	Chapter 6		
TH: 4-11	Integrals of trig functions	Chapter 6		
F: 4-12	Integrals of hyperbolic functions	Chapter 6		
M: 4-15	Quiz 10 / Homework Discussion			
T: 4-16	Velocity etc.. revisited	Chapter 6		Mission 9
W: 4-17	Area problems	Chapter 6		
TH: 4-18	Volume by the slice or shell	Chapter 6		
F: 4-19	Other applications of integral calculus	Chapter 6		
M: 4-22	Quiz 11 / Homework Discussion			
T: 4-23	Math Battle 4			Mission 10
W: 4-24	Questions ?			
TH: 4-25	TEST IV			
F: 4-26	Further examples			
M:4-29	Further examples			
T: 4-30	Further examples			
W: 5-1	Reading Day			
	Finals May 2 to May 7			Comprehensive

Course Guide Calculus I: Spring 2024:

- Test 1=120pts, Test 2=120pts, Test 3=120pts, Test 4 = 120pts
  Missions (200pts) / Quizzes (80pts) / Final = 240pts.

- I mark all assignments as "does not count towards the final grade" in Canvas since the running average in Canvas is almost always misleading. When the time comes I will add a column in Canvas which shows the net points earned through the course. The primary function of Canvas until that point is merely to record grades which are given throughout the term. I plan 11 quizzes, but I'll only keep the top 3 scores of Quizzes 1,2,3,4. And the top 3 scores of Quizzes 5,6,7,8. And the top two scores of Quizzes 9,10,11. In other words, I drop 3 quizzes selectively throughout the term. Mission scores are very unlikely to be dropped. Homework is extremely important.

- The required homework is given as "Missions". There is a pdf of each Mission posted in Canvas, you turn in your solution physically at the start of class when it is due. I don't collect all of the Mission problems in this class, there are many that are good for practice and some have solutions posted on my website www.supermath.info. I will announce which subset of the Mission problems will be collected in class the day before the Mission is due, or by Canvas announcement perhaps 2 days before it is due depending on the week. I expect you monitor announcements often. If the class was to form a group chat that would be a great idea as it would increase the chance that someone notices an announcement when it is made.

- Owning a physical copy of the text is not required, but I recommend it for reference and ease of reading. Certainly an older edition is a good option since it is significantly less expensive than a recent edition. I do expect you use my Lecture Notes as the primary study material.

- No cell phones or similar devices may be out during the exam

- You cannot use a graphing calculator. I recommend the Casio fx115ex or something similar. You do need a calculator at certain points of the material and I do not have one to lend you generally. However, the Math Department has a collection of ugly pink calculators you can borrow from our beloved Math Secretary Karen Guthrie whose desk is in the Math Department on the 4th floor of DeMoss.

- You can work together on the homework. However, remember, the purpose of the homework is actually not for you to earn points. The real purpose for homework is for you to learn the concepts, definitions and methods of calculation which comprise university calculus. It would be a mistake to assume this course parallels a highschool AP Calculus course, that is probably not the case. We do learn to solve certain standard problems, so problem solving is part of the course. However, we also engage in study which has the format of discussion/discovery where we use mathematical analysis to make a mixed qualitative and quantitative analysis. Sometimes there is not a singular answer, rather there are only partial answers, good answers and better answers. A consistent goal of this course is to mature in our use of mathematical language to communicate details to others with precision. Your job is to convince the reader of your work of your assertions. The reader should not need to complete arguments for you, they should be complete in your solution. Notation matters. I do take off points for incorrect notation. To see what correct notation looks like, you can see what I write in lecture almost without exception and study the solutions to the assignments which I offer throughout the course. I do offer partial credit, but we should strive for what is best, not for what is just passable.

- I am here to help. I have office hours where you can ask me about problems you have **already attempted.** Please do not plan to work problems in my office, you are welcome to ask questions, but, it is better if you study somewhere else. To summarize: office hours are for questions.