

**Text:** *University Calculus*, by Hass Weir, and Thomas, published by Addison-Wesley

**Calculator:** You are required to have a graphing calculator for this course. The TI-86 is recommended, but the TI-84, 85, 89, and 92 are all sensible options.

**Math Resource Center:** Students in Math 106 are encouraged to use the Math Resource Center in Avery 13B if they have questions related to this course, or as a place to meet and discuss group projects. Hours for the MRC are MTWR 12:30 – 8:30 pm, F 12:30 – 2:30 pm, and Su 1:00 – 5:00pm.

**Math Placement:** Students who take Math 106 must satisfy the requirements of the Math Placement Policy. You satisfy the policy if you satisfy one of the following conditions:

- 1) You have passed UNL's Math 102 or 103 (or the equivalent course at UNO or UNK) with a grade of C, P or better.
- 2) You have passed the prerequisite courses in high school or at another college and have a qualifying score on the Math Placement Exam dated after October 2006. The Math Placement Exam will be given online at the College Testing Center (Burnett 127). For more details ask at the math office (Avery 203), or check the department web site (<http://www.math.unl.edu>).
- 3) You have a grade of D, D+, or C- in this course from UNL, UNO, or UNK.

**Gateway Exam:** This exam will cover techniques of differentiation. To get any credit on the Gateway Exam you must demonstrate a high level of proficiency and accuracy. The exam will consist of 10 questions. Of these you must get at least 8 completely correct to pass the exam. No partial credit will be given. You will not be allowed to use calculators or notes. If you do not pass the Gateway exam when it is first administered (Thursday October 18th) you must go to either the College Testing Center or the Math department's computer lab (Avery 18) for a computer administered retake. (A picture ID will be required.) You may attempt the electronic version of the Gateway Exam at most once a day. The deadline for passing the Gateway Exam is Thursday November 8th.

**Final Exam:** The final exam is on **Wednesday December 19th, from 6-8pm**. The room will be announced during the final week of class. Students are expected to arrange their personal and work schedule to allow them to take the exam at the scheduled time. Calculators will be allowed on the final exam, as will a 3"x5" card of notes. No cell phones or other devices with a wireless capability will be allowed during any exam.

Date		Section	Topic
August	27	M	Intro to calculus
	29	W	2.1 Rates of change and tangents to curves
	31	F	2.2 Limit of a function and limit laws
<b>Labor Day: September 3<sup>rd</sup></b>			
September	5	W	2.4 One-sided limits and limits at infinity
	7	F	2.5 Infinite limits and vertical asymptotes
<b>Friday September 7<sup>th</sup> is the last day to withdraw without the course appearing on your transcript. From September 8<sup>th</sup> to November 16<sup>th</sup> you can drop the course with a grade of W. After November 16<sup>th</sup>, you cannot withdraw from the course.</b>			
September	10	M	2.6 Continuity
	12	W	2.7 Tangents and derivatives at a point
	14	F	3.1 The derivative as a function
September	17	M	3.1/3.2 The derivative as a function/Differentiation rules

	19	W	3.2	Differentiation rules
	21	F	3.3	The derivative as a rate of change
September	24	M	3.4	Derivatives of trigonometric functions
	26	W	<b>Review</b>	
	27	R	<b>Exam 1</b>	
	28	F	3.5	The chain rule and parametric equations
October	1	M	3.5	The chain rule and parametric equations
	3	W	3.6	Implicit differentiation
	5	F	1.5	Inverse functions and logarithms
October	8	M	3.7	Derivatives of inverse functions and logarithms
	10	W	3.8	Inverse trigonometric functions
	11	R	<b>Project Assigned</b>	
	12	F	3.9	Related rates
October	15	M	3.10	Linearization and differentials
	17	W	4.1	Extreme values of functions
	18	R	<b>Gateway Exam</b>	
	19	F	4.2	The Mean Value Theorem
<b>Friday October 19<sup>th</sup> is the last day to change your grade option to or from Pass/No Pass.</b>				
<b>Fall Break: October 22<sup>nd</sup> – 23<sup>rd</sup></b>				
October	24	W	4.3	Monotonic functions and the first derivative test
	26	F	4.4	Concavity and curve sketching
October	29	M	4.7	Newton's Method
	31	W	<b>Review</b>	
November	1	R	<b>Exam 2</b>	
	2	F	4.5	Applied optimization
November	5	M	4.5	Applied optimization
	7	W	4.6	Indeterminate forms and L'Hopital's Rule
	8	R	<b>Last Day to Take Gateway Exam</b>	
	9	F	4.8	Antiderivatives
November	12	M	5.1	Estimating with finite sums
	14	W	5.2	Sigma notation and limits of finite sums
	15	R	<b>Project Due</b>	
	16	F	5.3	The definite integral
November	19	M	5.4	The Fundamental Theorem of Calculus
<b>Thanksgiving Break: November 21<sup>st</sup> – 25<sup>th</sup></b>				
November	26	M	5.5	Indefinite integrals and the substitution rule
	28	W	5.6	Substitution and areas between curves
	30	F	6.1	Volumes by slicing and rotation about an axis
December	3	M	6.2	Volumes by cylindrical shells
	5	W	<b>Review</b>	
	6	R	<b>Exam 3</b>	
	7	F	6.3	Lengths of plane curves
December	10	M	Catch up; exercises to be assigned	
	12	W	<b>Review</b>	
	14	F	<b>Review</b>	

**Departmental Grading Appeals Policy:** The Department of Mathematics does not tolerate discrimination or harassment on the basis of race, gender, religion, or sexual orientation. If you believe you have been subject to such discrimination or harassment, in this or any math course, please contact the department. If, for this or any other reason, you believe your grade was assigned incorrectly or capriciously, appeals may be made to (in order) the instructor, the department chair, the departmental grading appeals committee, the college grading appeals committee, and the university grading appeals committee.