Math 109
Calculus I
Fall 2009

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Office: BSS 358

Office Hours: Monday 4-5, Tuesday 8-10, Wednesday 3-4, and by appointment.

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Time and Place: M W Th F 9:00-9:50 Siemens Hall 128

Textbook: Single Variable Calculus: Early Transcendentals, 6th Edition, James Stewart.

Calculator: Although not required I strongly encourage you to get a graphing calculator for this course. I recommend the Texas Instrument calculators and especially the TI-89 or TI-89 Titanium. Note that you will need a calculator for some homework assignments, but **calculator use will be limited on quizzes and exams**.

GE: Math 109 is considered an area B general education lower division course. As such it can fulfill a portion of the area B requirement. This course will develop mathematical concepts and quantitative reasoning and demonstrate their widespread applications in problem solving.

Course Topics: Limits, continuity, derivatives, integrals and their applications.

Homework: You should work very hard on the homework. It almost goes without saying that you **cannot** learn mathematics without doing lots and lots of problems. The homework assignments are on the schedule of topics below. This semester all assignments will be done online using the homework application WebAssign. The website is at www.webassign.com. I sent an email to your HSU account on Saturday, August 22 with instructions for logging on. You have a total of 5 attempts at each problem per assignment. Each assignment is worth 10 points, and you will be able to keep track of your scores on the site. I will drop your two lowest homework scores.

With some exceptions, furlough days, holidays, the table below tells you when the homework assignments are due.

Assignment Made	Assignment Due (2:00 am)
Monday	Thursday
Wednesday	Friday
Thursday	Monday
Friday	Tuesday

Worksheets: Some days in class you will have the opportunity to work in groups on worksheets. These will usually be collected the following class meeting time. You may continue to work with your group members outside of class. The dates of the worksheets are listed on the schedule below.

Exams: We will have two midterm exams during the semester in addition to a cumulative final exam. The dates for these exams are given below. Mark your calendars and plan accordingly as **no makeup exams** will be given.

Midterm Exam 1	Friday, September 25
Midterm Exam 2	Thursday, November 5
Final Exam	Monday, December 14, 8:00 am – 9:50 pm

Academic Integrity: Please see http://studentaffairs.humboldt.edu/judicial/academic_honesty.php for HSU's policy on academic honesty.

Grading Components:

HW	15%
Worksheets	20%
Exams	20% each
Final	25%

Important Suggestions:

1. Don't get behind in your work, homework, etc.. Come to class every day.
2. Participate in class, ask questions, make use of my office hours.
3. Form a study group, however make sure everyone is participating equally.
4. Read the book! You must spend time reading each section carefully. The best way to read a math book is to first read the section like it's a novel, i.e. don't skip around and don't worry about verifying details. **Then** read it again with a pen and scratch paper handy and verify details.
5. You are responsible for knowing the University policy, procedures, and schedule for dropping or adding classes. See http://www.humboldt.edu/~reg/regulations/schedadjust.html for more information.

Emergency Evacuation Procedures: The evacuation plan for the classroom is posted on the orange signs. Also review http://studentaffairs.humboldt.edu/emergencyops/campus_emergency_preparedness.php for information on campus Emergency Procedures. During an emergency, information can be found on campus conditions at: 826-INFO or www.humboldt.edu/emergency.

The following gives an approximate list of topics we will cover this semester. I will try my best to stick to this schedule. Make sure to read each section before the lecture.

Schedule of Topics and Assignments

Date	Topics	Sections	Assignment
8/24	Introduction, Tangent and Velocity Problems	2.1	Intro to Web Assign, 1 Due: August 27
8/26	Limits	2.2	2 Due: August 28
8/27	Limits	2.2	3 Due: September 3
8/28	No class, furlough		
8/31	Labor Day Holiday		
9/2	Limit Laws	2.3	4 Due: September 4
9/3	Limit Laws, Definition of Limits	2.3, 2.4	5 Due: September 7
9/4	Definition of Limits	2.4	6 Due: September 11
9/7	Labor Day, no class		

9/9	No class, furlough		
9/10	**Worksheet 1**		
9/11	Continuity	2.5	7 Due: September 16
9/14	Limits at Infinity	2.6	8 Due: September 17
9/16	Limits at Infinity, Derivatives	2.6, 2.7	9 Due: September 18
9/17	Derivatives as Rates of Change	2.7	10 Due: September 21
9/18	The Derivative as a Function	2.8	11 Due: September 22
9/21	Derivatives of Polynomials, **Worksheet 2**	3.1	12 Due: September 24
9/23	Derivatives of Exponential Functions	3.1	13 Due: September 25
9/24	Review		
9/25	**Mid-term Exam 1**		
9/28	The Product Rule	3.2	14 Due: October 1
9/30	The Quotient Rule, Derivatives of Trigonometric Functions	3.2, 3.3	15 Due: October 2
10/1	Derivatives of Trigonometric Functions	3.3	16 Due: October 5
10/2	The Chain Rule	3.4	17 Due: October 6
10/5	The Chain Rule, Implicit Differentiation	3.4, 3.5	18 Due: October 8
10/7	Implicit Differentiation	3.5	19 Due: October 9
10/8	Derivatives of Logarithmic Functions	3.6	20 Due: October 12
10/9	Applications of Derivatives	3.7	21 Due: October 13
10/12	Applications of Derivatives, Exponential Growth	3.7, 3.8	22 Due: October 15
10/14	Exponential Growth, Related Rates	3.8, 3.9	23 Due: October 16
10/15	Related Rates	3.9	24 Due: October 19
10/16	**Worksheet 3**		
10/19	Linear Approximation	3.10	25 Due: October 22
10/21	Hyperbolic Functions	3.11	26 Due: October 23

10/22	Extreme Values	4.1	27 Due: October 26
10/23	The Mean Value Theorem	4.2	28 Due: October 27
10/26	Graphical Implications of the Derivative	4.3	29 Due: October 29
10/28	L'Hospital's Rule	4.4	30 Due: October 30
10/39	Summary of Curve Sketching	4.5	31 Due: not collected
10/30	**Worksheet 4**		
11/2	Optimization	4.7	32 Due: November 5
11/4	Review	4.7	
11/5	**Mid-term Exam 2**		
11/6	No class, furlough		
11/9	Newton's Method	4.8	33 Due: November 13
11/11	Veterans Day, no class		
11/12	Antiderivatives	4.9	34 Due: November 16
11/13	Area	5.1	35 Due: November 17
11/16	Distance	5.1	36 Due: November 19
11/18	The Definite Integral	5.2	37 Due: November 20
11/19	The Fundamental Theorem of Calculus	5.3	38 Due: December 1
11/20	No class, furlough		
11/23- 11/27	**Thanksgiving Holiday**		
11/30	Indefinite Integrals	5.4	39 Due: December 3
12/2	The Net Change Theorem	5.4	40 Due: December 4
12/3	The Substitution Rule	5.5	41 Due: December 7
12/4	The Substitution Rule	5.5	42 Due: December 8
12/7	Area between Curves	6.1	43 Due: December 10
12/9	**Worksheet 5**		
12/10	Review/catchup		
12/11	No class, furlough		