Math 121 Section 5617 - Calculus I
Fall 2007

Professor: Dr. Jess Lenarz
Meeting Time & Place: 11:50 am - 1:00 pm MWF Ivers 218
Office: Ivers 234E
Office Hours: MW 10:30-11:40, 2:30-4:00; T 10:30-11:40, 1:20-3:50;
ThF 10:30-11:40; or by discovery or appointment
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Website: http:\\www.cord.edu\faculty\lenarz\Math121\F07\index.htm

Text: *Calculus, Early Transcendentals*, 1st ed. by John Rogawski. We will cover through Chapter 5.

Course Objectives:

- Review and (re)learn the fundamentals of graphing, algebra, and trigonometry.
- Study the concept of functions and limits, from both an intuitive and computational perspective.
- Learn the rules and techniques of differentiation and be able to explain the concept of the derivative.
- Be able to use differentiation in applied and more purely mathematical contexts, including various word problems, relative and absolute extrema, and rectilinear motion.
- Understand the concept of integration and be able to evaluate elementary integrals.
- Acquire the skill of studying and, to some degree, learning the assigned reading material before class, so that you can be a more active and constructive learner and participant in class discussion. (This is one of the differences between college-level versus high school-level work.)
- To prepare the student for courses that have Calculus I as a prerequisite.

Free Tutoring: The Mathematics Department provides free Calculus tutorin Sunday, Tuesday, and Thursday nights in Ivers 218. Times will be announced in a few days. The Academic Enhancement center (AEC) in Lower Level Fjelstad also has Math tutors Sunday through Thursday 7 pm to 9 pm. For more information visit the AEC homepage: http://student.cord.edu/dept/aec/index.shtml

Grading: Final grades will be determined by the following components:

Component	%	Date
Self-evaluation	5 %	October 17
Instructor-evaluation	5 %	
HW/Quizzes	30 %	Every class
Exam 1	15 %	September 28
Exam 2	15 %	October 26
Exam 3	15 %	November 21
Final Exam	15 %	December 14

Grades will be based on the following scale:

Percentage	Grade	Percentage	Grade
$93-100$	A	$73-76$	C
$90-92$	A-	$70-72$	C-
$87-89$	B+	$67-69$	D+
$83-86$	B	$63-66$	D
$80-82$	B-	$60-62$	D-
$77-79$	C+	$0-59$	F

Self-evaluation: All students will be required to submit a self-evaluation at mid-semester, due Wednesday, October 17. You should communicate what mid-semester grade you should receive and why. I will grade these based on your justification for your grade. This is designed to be an exercise to help you reflect on your performance in class and how you might improve during the remainder of the semester.

Quizzes & Homework: Homework problems for each section will be posted on the website. The assigned problems are due two class periods later. Every class period (except exam days) will begin with a quiz or the collection of homework problems. Late homework will not be accepted. There will be no makeup quizzes. Your three (3) lowest homework/quiz grades will be dropped at the end of the semester. The answers to selected odd-numbered problems are in the back of the book. I encourage you to work together outside of class, but you are expected to write up solutions by yourself, in your own words.

Exams: There will be 3 in-class exams given during the course as well as a comprehensive final exam. Each in-class exam will be 70 minutes long. Attendance is required for exams. If you can not attend for some reason, you must contact me BEFORE the exam to schedule a makeup exam. If you are ill the day of the exam, you must give me a doctor's note to schedule a makeup exam.

Calculators: Calculators will be prohibited for certain quizzes or exams. You may use a calculator at any other time, but exams will be written in such a way that a calculator gives no unfair advantage. Please see me if you need help selecting a calculator.

Partial Credit: Partial credit will be awarded. If your final answer in incorrect, but your thought processes were correct in general, you will receive some credit. In a similar manner, if no thought processes are indicated and your answer is correct, you will not receive full credit. YOU MUST ALWAYS SHOW YOUR WORK!

Academic Integrity: All students are expected to follow the policies set forth in the Academic Integrity section of the catalog. Cheating will NOT be tolerated. If you are caught cheating, you will receive a zero for that quiz, exam or assignment.

Special Accommodations: Any student who feels s/he may need an accommodation based on the impact of a disability should see me privately to discuss your specific needs. Please contact Monica Kersting in the Office of Disability Services at 299-3514 in Academy 106 to coordinate reasonable accommodations for students with documented disabilities.

Attendance: Students are expected to attend and participate in class. If you aren't in class, you won't learn anything! If you must miss class due to illness, please call me and let me know. If you must miss class due to a college sponsored activity, please notify me in advance. You may be required to do makeup work for the time you are gone. A general rule of thumb is no more than three absences.

Classroom Behavior: Please respect your fellow classmates. This means not distracting other students during class with ringing cell phones, talking on the phone, talking with your neighbor, etc. I do not mind if you eat or drink during class, just clean up after yourself.

Changes: Components of this syllabus are subject to change. If changes need to be made in the syllabus, students will be involved in the decision process.

Tentative Schedule

Date	Section
Aug. 31	Syllabus & 1.1 - Functions & Graphs
Sept. 3	1.2 & 1.3 - Basic Classes of Functions
Sept. 5	1.4 & 1.5 - Trig & Inverse Functions
Sept. 7	1.6 - Exponential & Log Functions

Date	Section
Sept. 10	Problem/Catch-up Day
Sept. 12	2.1 & 2.2 - Intro to Limits & Numerical/Graphical Approaches
Sept. 14	2.3 - Basic Limit Laws
Sept. 17	2.4 - Limits & Continuity
Sept. 19	2.5 - Evaluating Limits Algebraically
Sept. 21	2.6 - Trig Limits
Sept. 24	Problem/Catch-up Day
Sept. 26	Review
Sept. 28	Exam 1 (Chapters 1 & 2)
Oct. 1	3.1 & 3.2 - Definition of Derivative & Derivative as a Function
Oct. 3	3.3 - Product & Quotient Rule
Oct. 5	3.5 & 3.6 - Higher Derivatives & Trig Derivatives
Oct. 8	3.7 - Chain Rule
Oct. 10	3.8 - Implicit Differentiation
Oct. 12	3.9 & 3.10 - Derivatives of Inverse, Exponential, & Log Functions
Oct. 15	3.11 - Related Rates
Oct. 17	3.11 - Related Rates
Oct. 19	Problem/Catch-up Day
Oct. 22	Mid-semester Break
Oct. 24	Review
Oct. 26	Exam 2 (Chapter 3)
Oct. 29	4.1 - Linear Approximation
Oct. 31	4.2 - Extreme Values
Nov. 2	4.3 - Monotonicity
Nov. 5	4.4 - Shape of a Graph
Nov. 7	4.5 - Graph Sketching and Asymptotes
Nov. 9	4.6 - Optimization
Nov. 12	4.6 - Optimization
Nov. 14	4.7 - L'Hospital's Rule
Nov. 16	Problem/Catch-up Day
Nov. 19	Review
Nov. 21	Exam 3 (Chapter 4)
Nov. 23	Thanksgiving Break
Nov. 26	4.9 - Antiderivatives
Nov. 28	5.1 - Approximating & Computing Area
Nov. 30	5.2 - The Definite Integral
Dec. 3	5.3 & 5.4 - Fundamental Theorem of Calculus
Dec. 5	5.6 - Substitution
Dec. 7	5.7 - Transcendental Functions
Dec. 10	Review
Dec. 14	Final Exam (11:00 am - 1:00 pm)