

Math 122 Section 5609 - Calculus II

Summer I 2007

Professor: Dr. Jess Lenarz

Meeting Time & Place: 8:45 am - 11:45 am MTWHF Ivers 214

Office: Ivers 234E

Office Hours: MTWH 2:00 pm - 4:00 pm

Phone: 299-3347

email: lenarz@cord.edu

Website: <http://www.cord.edu/faculty/lenarz/Math122/SS07/index.htm>

Text: *Calculus, Early Transcendentals*, 5th ed. by James Stewart. We will cover Chapters 6-11 (omitting some sections).

Course Objectives:

- Review and (re)learn the fundamentals of graphing, algebra, trigonometry, limits and differentiation.
- Learn the rules and techniques of integration and be able to explain the concept of the integral.
- Be able to use integration in applied and more purely mathematical contexts, including various word problems.
- Learn techniques for evaluating an infinite series.
- Gain a brief knowledge of some elementary ordinary differential equations.
- Express a point, curve or equation in the polar coordinate system.
- 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.
- To prepare the student for courses that have Calculus II as a prerequisite.

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

Component	%	Date
Instructor-evaluation	5 %	
HW/Quizzes	20 %	Every class
Exam 1	25 %	May 11
Exam 2	25 %	May 18
Exam 3	25 %	June 1

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

Quizzes & Homework: Homework problems for each section will be posted on the webpage. The answers to all odd-numbered problems are in the back of the book. I encourage you to work problems outside of class but the problems will not be collected. Every class period (except exam days) will begin with a quiz on the section(s) from the previous day taken directly from problems assigned from the previous day. There will be no makeup quizzes.

Exams: There will be 3 in-class exams given during the course. Each in-class exam will be 90-120 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: You may use a calculator at any 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 is 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 or exam.

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. You may be required to do makeup work for the time you are gone. Due to the compact nature of summer classes, a general rule of thumb is no more than one absence.

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
May 7	7.1 - Syllabus, Review, Integration by Parts
May 8	7.2 - Trigonometric Integrals 7.3 - Trigonometric Substitution
May 9	7.4 - Integration by Partial Fractions 7.5 - Strategies for Integration
May 10	7.7 - Approximate Integration 7.8 - Improper Integrals
May 11	Exam 1 (Chapter 7)
May 14	6.1 - Areas Between Curves 6.2 - Volumes
May 15	6.3 - Volumes by Cylindrical Shells 8.1 - Arc Length
May 16	8.2 - Area of a Surface of Revolution 8.3 - Applications to Physics and Engineering 8.4 - Applications to Economics and Biology 8.5 - Probability (Student's Choice)
May 17	9.1 - Modeling with Differential Equations 9.3 - Separable Equations
May 18	Exam 2 (Chapters 6, 8, 9)

Date	Section
May 21	11.1 - Sequences 11.2 - Series
May 22	11.3 - Integral Test 11.4 - Comparison Tests
May 23	11.5 - Alternating Series Test 11.6 - Absolute Convergence and the Ratio and Root Tests
May 24	11.7 - Strategy for Testing Series 11.8 - Power Series
May 25	11.9 - Functions as Power Series 11.10 - Taylor and Maclaurin Series
May 28	Memorial Day - No Class
May 29	10.1 - Curves Defined by Parametric Equations 10.2 - Calculus with Parametric Curves
May 30	10.3 - Polar Coordinates 10.4 - Area & Length in Polar Coordinates
May 31	10.5 - Conic Sections 10.6 - Conic Sections in Polar Coordinates
June 1	Exam 3 (Chapter 10, 11)