

Math 122 Section 5618 - Calculus II

Spring 2007

Professor: Dr. Jess Lenarz

Meeting Time & Place: 1:20 pm - 2:30 pm MWF Ivers 214

Office: Ivers 234E

Office Hours: Monday & Wednesday 10:30-11:40, 2:30-4:00;

Tuesday 10:30-12:00, 2:00-4:00;

Thursday & Friday 10:30-11:40;

other times by discovery or appointment

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Website: <http://www.cord.edu/faculty/lenarz/Math122/S07/index.htm>

Text: *Calculus, Early Transcendentals*, 5th ed. by James Stewart. We will cover Chapters 6, 7, 11 and portions of Chapters 8, 9, and 10.

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.

Free Tutoring: The Mathematics Department provides a Calculus tutor Sunday, Tuesday, and Thursday nights in Ivers 210 time TBA. The Academic Enhancement center (AEC) in Lower Level Fjelstad also has Math tutors Monday through Thursday 3 pm to 5 pm and 7 pm to 9 pm, and Sunday night 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 %	Mid-semester
Instructor-evaluation	5 %	
HW/Quizzes	20 %	Every class
Project	10 %	TBA
Exam 1	15 %	January 24
Exam 2	15 %	February 21
Exam 3	15 %	March 30
Final Exam	15 %	April 27

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. 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 webpage. The answers to all odd-numbered problems are in the back of the book. I encourage you to work together outside of class and to see the calculus tutor in Ivers 210. Every class period (except exam days) will begin with a quiz on the section from the previous lecture or the collection of problems assigned from the previous lecture. You will be allowed to turn in up to three (3) late homework assignments without penalty. They must be turned in within one week of the due date or before the next exam, whichever comes first. There will be no makeup quizzes.

Project: There will be a project assigned later in the semester. The goal of this project is to solve a problem by integrating the techniques learned throughout the semester and present your solution in a clear and concise paper (i.e., you will describe your solution not only with symbols but with words...). More information will be provided soon.

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 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, 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
Jan. 8	Syllabus and Review Homework
Jan. 10	6.1 - Areas Between Curves
Jan. 12	6.2 - Volumes
Jan. 15	6.3 - Volumes by Cylindrical Shells
Jan. 17	6.4 - Work
Jan. 19	Problem/Catch-up Day
Jan. 22	Review
Jan. 24	Exam 1
Jan. 26	7.1 - Integration by Parts
Jan. 29	7.2 - Trigonometric Integrals
Jan. 31	7.4 - Integration by Partial Fractions
Feb. 2	7.5 & 7.6 - Strategies for Integration & Integration Tables
Feb. 5	Problem/Catch-up Day
Feb. 7	7.7 - Approximate Integration
Feb. 9	7.8 - Improper Integrals
Feb. 12	8.1 - Arc Length
Feb. 14	8.2 - Area of a Surface of Revolution
Feb. 16	Problem/Catch-up Day
Feb. 19	Review
Feb. 21	Exam 2
Feb. 23	11.1 - Sequences
Feb. 26	Spring Break
Feb. 28	Spring Break
Mar. 2	Spring Break
Mar. 5	11.2 - Series
Mar. 7	11.3 - Integral Test
Mar. 9	11.4 - Comparison Tests
Mar. 12	11.5 - Alternating Series Test
Mar. 14	11.6 - Absolute Convergence and the Ratio and Root Tests
Mar. 16	11.7 - Strategy for Testing Series
Mar. 19	Project Day
Mar. 21	11.8 - Power Series
Mar. 23	11.9 - Functions as Power Series
Mar. 26	11.10 - Taylor and Maclaurin Series
Mar. 28	Review
Mar. 30	Exam 3

Date	Section
Apr. 2	9.1 - Modeling with Differential Equations
Apr. 4	9.3 - Separable Equations
Apr. 6	Easter Break
Apr. 9	Easter Break
Apr. 11	9.4 - Exponential Growth and Decay
Apr. 13	10.1 - Curves Defined by Parametric Equations
Apr. 16	10.2 - Calculus with Parametric Curves
Apr. 18	10.3 - Polar Coordinates
Apr. 20	Problem/Catch-up Day
Apr. 23	Review
Apr. 27	Final Exam 8:30 am - 10:30 am