

Syllabus
Math 122, Section 3
CRN 29747
Spring 2009

Instructor: Eric Gottlieb
Meetings: MWF 10:00 – 10:50 in 201 Kennedy
R 10:00 – 10:50 in 207 Kennedy
Text: *Calculus*, 4th edition, by Larson, Hostetler, & Edwards
Office: 317 Ohlendorf
Office Hours: M – F 1:00 – 2:00
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Material to be covered: We will cover the following material from the text.

- Chapter 5, Sections 4 – 8: Review of the fundamental theorem of calculus and integration by substitution, both of which you should have seen in Calculus I. Numerical integration. The natural logarithm as an integral. Integrals involving inverse trigonometric functions.
- Chapter 6, Sections 1 – 4: Differential equations. Graphical and numerical methods, such as slope fields and Euler’s method. Application to growth and decay, including the logistic equation.
- Chapter 7, Sections 1 – 7: Areas, lengths, and volumes. Moments, centers of mass, and centroids. Applications to work and fluid statics.
- Chapter 8, Sections 1 – 5, 7, and 8: Techniques for integration, including integration by parts, trigonometric integrals and substitution, and partial fractions. L’Hopital’s rule. Improper integrals.
- Chapter 9, Sections 1 – 10: Sequences. Series. Tests for convergence, including the integral, p -, comparison, alternating series, ratio, and root tests. Taylor polynomials. Power series and their role in describing functions. Taylor and Maclaurin series.

Calculators are not permitted on exams.

Homework: I will assign homework for each section but I will not collect it. It is definitely to your advantage to do the homework, however, as questions on quizzes and exams will be similar (in some cases, identical) to questions from the homework. I will answer questions about the homework at the start of each class, time permitting.

Quizzes: There will be 13 take home quizzes over the course of the semester. They will be distributed on Monday and due in class on Wednesday morning. The quizzes will normally consist of two problems which will be similar to those assigned as homework and worth 5 points each. There will be no makeup quizzes, but there will be opportunities to replace low quiz grades with one-page reports on math talks. Quizzes are scheduled to be given on 21 and 26 January; 2, 9, 16, and 23 February; 2, 9, 23, and 30 March; and 6, 20, and 27 April.

Projects: There will be two written group projects given over the course of the semester. Their purpose is to encourage you to learn and work independently and to practice communicating technical information in written form. The first of these will be assigned on 26 January and collected on 6 February. The second will be assigned on 13 April and collected on 24 April.

Exams: There will be three midterm exams and a final. The exams are scheduled to be given on the dates indicated below. The dates of the exams are fixed but the material to be covered is tentative and depends on our pace.

| Exam | Date | Material to be covered (tentative) |
|-------|--|---|
| MT 1 | Wednesday 11 February | Sections 5.4 – 5.8, 6.1 – 6.4, 7.1 – 7.3 |
| MT 2 | Thursday 5 March | Sections 7.4 – 7.7, 8.1 – 8.4 |
| MT 3 | Wednesday 8 April | Sections 8.5, 8.7, 8.8, 9.1 – 9.5 |
| Final | Saturday 9 May at 8:30 AM in 201 Kennedy | Comprehensive, with extra emphasis on material not covered on earlier exams |

If you know you will miss an exam, notify me in advance. I am more sympathetic to requests to take an exam early than I am to requests to take it late. In either case, you must provide a compelling reason for missing the exam with supporting documentation.

Your Final Grade is determined as follows:

| | |
|------------------|----------|
| Midterm Exams: | 17% each |
| Project Average: | 10% |
| Quiz Average: | 17% |
| Final Exam: | 22% |

The letter equivalent of your number grade is determined as follows. These represent minimum grades in order to allow me some discretion. It is possible,

for example, to receive a B while earning a total score of less than 83%. However, if you earn a score between 83% and 86%, you are guaranteed to receive a grade of B or better.

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

Attendance is not a formal part of your grade, but I will take attendance each day. If you miss more than five classes without a valid reason, I reserve the right to ask the Dean to drop you from the class.

If you get stuck, please take action. Peer tutoring is available in the Math Support Center (MSC), which is located one floor above ground level in Ohlendorf. The MSC organizes study groups for Calculus II. I am always happy to see you in office hours. Please take advantage of these services! Don't be shy.

The Honor Code: I take the Rhodes Honor Code seriously and I expect you to do the same. All graded work must comply with the Honor Code.