

## Course Information

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### Course Websites:

[http://blackboard.louisville.edu/bin/redirect\\_temp.pl?course\\_id=MATH%2D205%2D02%2D4118](http://blackboard.louisville.edu/bin/redirect_temp.pl?course_id=MATH%2D205%2D02%2D4118)  
<http://aleph.math.louisville.edu/teaching/2011FA-205H>

**Lecture:** MWF 11:00–12:15 in Natural Sciences Building 110

**Prerequisites:** MATH 111-112, MATH 190 or an appropriate score on a placement exam.

**Special notes:** Credit may not be received for both MATH 205 and either MATH 180 or ENGR 101.

**Textbook:** *Calculus, Early Transcendentals* by James Stewart, seventh edition.

**Learning Outcomes:** Students who complete this course will be expected to describe the concept of the limit of a function and calculate limits both graphically and analytically; recognize the definition of the derivative as a limit and identify the relationship between derivatives and graphs of functions; describe the definition of the definite integral as a limit of Riemann sums and interpret the definition as an area; demonstrate understanding of the relationship between the definite integral and antiderivatives via the fundamental theorem of calculus; master the standard formulas for computing derivatives and antiderivatives of functions.

**General Education Content:** MATH 205 is a general education course and may not be taken pass/fail. This course satisfies the university general education requirement in the mathematics content area. Students who satisfy this requirement will demonstrate that they are able to do all of the following: represent mathematical information symbolically, visually, and numerically; use arithmetic and geometric models to solve problems; interpret mathematical models such as formulas, graphs, and tables; estimate and check answers to mathematical problems, determining reasonableness and correctness of solutions.

**Responsibilities:** You are responsible for attending class on a regular basis and maintaining comprehension of the scheduled class objectives. You are expected to be participants in class, and to attend examinations. Assignments are provided for your benefit and you are expected to work on them as necessary.

**Special needs:** Any scheduled absence during a quiz or examination, or any other special needs, *must* be brought to my attention during the first week of class. Unscheduled absences will be handled on a case-by-case basis, with exceptions generally made only for documented emergencies.

**Calculators:** Calculators are unnecessary for any in-class work, and may not be used on quizzes or examinations. Calculators will also be unnecessary for most homework problems, but may be used at your discretion. For any calculation more complicated than the evaluation of simple functions, you are expected to show your work.

**Honesty:** There are many resources available to help you succeed in this class, including consultation during office hours and cooperation with other students. It is important, however, that all papers handed in be the result of your individual comprehension of the course material. Duplication of others' work is both a disservice to your own education and a serious violation of the university's academic honesty policy.

**Grades:** Homework is ungraded and is provided for study purposes. Quizzes will be based on the homework problems, and will account for 25% of your grade. The three midterm examinations will each be worth 15%, and the comprehensive final examination is worth 30%. A 90% overall guarantees a grade of A–, 80% guarantees a B–, and 70% guarantees a C–.

**Changes:** The syllabus is subject to change. Changes will be announced in class and updated online.

## Course Schedule

This schedule is tentative and subject to change.

Week	Monday	Wednesday	Friday
1	August 22 Introduction	August 24 Sections 1.1–1.3	August 26 Preliminary Ideas
2	August 29 Section 1.5	August 31 Section 1.6	September 2 Section 2.1 Quiz #1
3	September 5 Labor day	September 7 Section 2.2	September 9 Section 2.3
4	September 12 Section 2.4	September 14 Section 2.5	September 16 Section 2.6 Quiz #2
5	September 19 Section 2.7	September 21 Section 2.8	September 23 Exam #1
6	September 26 Section 3.1	September 28 Section 3.2	September 30 Section 3.3 Quiz #3
7	October 3 Section 3.4	October 5 Section 3.4	October 7 Section 3.5
8	October 10 Midterm break	October 12 Catchup/Misc.	October 14 Section 3.5
9	October 17 Section 3.6	October 19 Section 3.9	October 21 Section 3.9 Quiz #4
10	October 24 Section 3.10	October 26 Section 4.1	October 28 Exam #2
11	October 31 Section 4.2	November 2 Section 4.3	November 4 Section 4.4 Quiz #5
12	November 7 Section 4.5	November 9 Section 4.7	November 11 Section 4.8
13	November 14 Section 4.9	November 16 Section 5.1 Quiz #6	November 18 Section 5.2
14	November 21 Exam #3	November 23 Thanksgiving	November 25
15	November 28 Section 5.3	November 30 Section 5.4	December 2 Section 5.5 Quiz #7
16	December 5 Review	December 7 No class	December 9
17	Monday, December 12 Final exam, 11:30–14:00		

## Problem Sets through Exam #1

Boldface problems are particularly advanced and will test problem-solving skills beyond the core of the course material.

- Complete by *August 26* in preparation for *Quiz #1*:
  - *Section 1.1*: 1, 3, 7, 9, 13, 15, 17, **21**, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, **49**, 51, **57**, **61**, **63**, 65.
  - *Section 1.2*: 3, 5, 7, 9, 13, 15, 17, 19.
  - *Section 1.3*: 1, 3, 5, 7, 9, 13, 21, **23**, 31, 35, 41, 43, 45, 51, 53, **55**.
  - *Chapter 1 Review*: true/false 1, 3, 5; exercises 1, 3, 5, 9, 11, 13, 15.
- Complete by *September 2* in preparation for *Quiz #1*:
  - *Section 1.5*: 1, 3, 11, **13**, **15**, **19**, 21, 23, 29(a–c).
  - *Section 1.6*: 1, 3, 5, 7, 9, 11, 13, 15, **17**, 19, 21, 23, 25, 33, 35, 37, 39, 41, 49, 51, 53 (express in terms of  $\ln$ ), 57, 61, 63, 65, 67, **69**, **71**.
  - *Chapter 1 Review*: true/false 7, 9, 11, 13; exercises 23, 25.
- Complete by *September 9* in preparation for *Quiz #2*:
  - *Section 2.1*: 1, 3, 5, 7. These problems may require a calculator.
  - *Section 2.2*: 1, 3, 5, 7, 9, 11, 15, 17, 29, 31, **33**, **35**.
  - *Chapter 2 Review*: exercise 1(a).
- Complete by *September 16* in preparation for *Quiz #2*:
  - *Section 2.3*: 1, 3, 5, 7, 9, 11, 13, 15, 17, **19**, **21**, 23, 31, **61**.
  - *Section 2.4*: 1, 3, 11, 13, 15, 17, 19, **21**, 23.
  - *Section 2.5*: 1, 3, 5, 7, 9, **11**, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 35, 37, **39**, 41, 45, 46, 49, 51, 53.
  - *Chapter 2 Review*: true/false 1, 3, 5, 9, 17; exercise 3, 5, 7, 9, 11, 15, 23, 25, 29, 33.
- Complete by *September 23* in preparation for *Quiz #3*:
  - *Section 2.6*: 1, 3, 5, 7, 9, 13, 15, 17, 19, 21, 23, **25**, 29, 31, 35, 37.
  - *Section 2.7*: 1, 5, **7**, 9, 11, 13, 15, 19, 23, 27, 29, 31, 33, 35, 37.
  - *Section 2.8*: 3, 5, 9, 11, 13, 21, 23, 25, **27**, 29, 31, 37, 39, 43, 45.
  - *Chapter 2 Review*: true/false 11, 13, 15, 23; exercise 13, 17, 35, 39(a–c).