

## Course Information

<b>Instructor:</b>	<i>Name:</i>	Jake Wildstrom
	<i>E-mail address:</i>	dwildstr@erdos.math.louisville.edu
	<i>Phone number:</i>	(502)852-5845 (x5845)
	<i>Office:</i>	Natural Sciences Building 231
	<i>Office hours:</i>	M12:30–13:30, R11:00–12:00
	<i>Alternative office hours:</i>	M15:00–16:00, W14:00–15:00, or by appointment

### Course Websites:

[http://blackboard.louisville.edu/bin/redirect\\_temp.pl?course\\_id=MATH-190-02-4112](http://blackboard.louisville.edu/bin/redirect_temp.pl?course_id=MATH-190-02-4112)

<http://aleph.math.louisville.edu/teaching/2011SP-190>

**Lecture:** MWF 9:30–10:45 in Natural Sciences Building 110

**Prerequisites:** Appropriate placement score or equivalent coursework.

**Description:** MATH 190 normally prepares student for MATH 205. Advanced topics in algebraic and rational expressions, factoring, exponents, and radicals; theory of equations and inequalities; functions. Analytic geometry, trigonometry.

**Special notes:** Credit may not be received for both MATH 190 and any of MATH 111, MATH 112, or ENGR 190. MATH 190 is a general education course and may not be taken pass/fail.

**Textbook:** *Precalculus: Mathematics for Calculus* by James Stewart, Lothar Redlin, and Saleem Watson, fifth edition.

**Learning Goals:** In this class, we will learn to construct and manipulate functions, specifically polynomial, rational, exponential, logarithmic, and trigonometric functions. This course fulfills a General Education requirement in Mathematics. One goal of the course will be to practice and develop critical thinking skills. Key elements of critical thinking include: identifying the question or problem, developing an abstraction or model, and drawing practical conclusions based on theoretical analysis.

**Responsibilities:** You are responsible for attending class on a regular basis and maintaining comprehension of the scheduled class objectives for each day. You are expected to be active participants in class, and to attend quizzes and examinations. Assignments are provided for your benefit and you are expected to work on them for your own benefit in order to grasp concepts for the course.

**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 simple arithmetic, 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, secondary textbooks, 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 one-sixth of your grade. The three midterm examinations will each be worth one-sixth, and the final examination is worth one-third. 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	January 10 Sections 1.1–1.5	January 12 Sections 1.6, 1.7, 1.8, 1.10	January 14 Sections 2.1, 2.2 Add/drop date <b>Quiz #1</b>
2	January 17 <b>MLK holiday</b>	January 19 Section 2.3, 2.4	January 21 Section 2.5 <b>Quiz #2</b>
3	January 24 Section 2.6	January 26 Sections 2.7, 2.8	January 28 Section 3.1 <b>Quiz #3</b>
4	January 31 Section 3.2	February 2 Section 3.3	February 4 <b>Exam #1</b>
5	February 7 Section 3.4	February 9 Section 3.5	February 11 Section 3.6
6	February 14 Section 4.1	February 16 Section 4.2	February 18 Section 4.3 <b>Quiz #4</b>
7	February 21 Section 4.3, 4.4	February 23 Sections 4.5	February 25 Section 5.1 <b>Quiz #5</b>
8	February 28 Section 5.2 Withdrawl date	March 2 Section 5.3	March 4 Section 5.4 <b>Quiz #6</b>
9	March 7 Section 5.5	March 9 Review/Catchup	March 11 <b>Exam #2</b>
10	March 14–18 <b>Spring break</b>		
11	March 21 Section 6.1	March 23 Section 6.2	March 25 Section 6.3
12	March 28 Section 6.4	March 30 Section 6.5	April 1 Section 7.1 <b>Quiz #7</b>
13	April 4 Sections 7.1, 7.2	April 6 Section 7.3	April 8 Section 7.4 <b>Quiz #8</b>
14	April 11 Section 7.5	April 13 Review/Catchup	April 15 <b>Exam #3</b>
15	April 18 Section 11.1	April 20 Section 11.2	April 22 Section 11.3
16	April 25 Review/Catchup	April 27 <b>No class</b>	April 29 <b>Final exam, 08:00–10:30</b>

## 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 *January 14* in preparation for *Quiz #1*:
  - *Section 1.1*: 15, 17, 19, 21, 23, 25, 27, 33, 41, 43, 45, 47, 49, 51, 61, 63.
  - *Section 1.2*: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, **25**, 27, 29, 31, 33, 35, 37, 39, 41, **43**, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69.
  - *Section 1.3*: 1, 3, 5, 7, 9, 11, 13, 15, **17**, 19, 21, 23, 25, 27, 29, 31, **33**, **35**, **37**, 39, 49, 51, **53**, **61**, **63**, **65**, 71, 73, 75, 77, 79, 81.
  - *Section 1.4*: 1, 3, 5, 7, 9, 11, 13, 15, 17, **19**, 21, 27, 29, 31, 33, 35, 37, 47, 51, 53, 61.
  - *Section 1.5*: 5, 7, 9, 11, 13, 15, **17**, **21**, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 53, 55, 57, 59.
  - *Section 1.6*: 1, 3, 5, 7, 9, **11**, 13, **15**, **17**, 19, 21, 29, 31, 33, 35, 37, **39**, **41**, **75**.
  - *Section 1.7*: 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 41, 47, 49, **59**, 63, 65, 67, 93, 95, **105**.
  - *Section 1.8*: 3, 5, 7, 13, 43, 45.
  - *Section 1.10*: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, **27**, 33, 41, 43.
- Complete by *January 21* in preparation for *Quiz #2*:
  - *Section 2.1*: 1, 3, 5, 7, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, **33**, 35, 37, 41, 43, 45, **47**, 49, **51**, 59, 67, 69.
  - *Section 2.2*: 1, 7, 9, **13**, 15, 25, 37, 45, **49**, 55, 85, **89**.
  - *Section 2.3*: 1, 3, 13, 15, 17, 19, 21, 23, **25**, **27**, 33.
  - *Section 2.4*: 1, 3, 5, 7, 9, 11, **13**, 17, 23, 25, 27, 29, 33, 37.
- Complete by *January 28* in preparation for *Quiz #3*:
  - *Section 2.5*: 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, **39**, 41, 43. It is not necessary to sketch the functions in exercises 5–27.
  - *Section 2.6*: 1, 3, 5, 11, **15**, 21, 23, 25, 27.
  - *Section 2.7*: 1, 3, 5, 7, 9, 17, 19, 21, 29, 31, 33, 35, 37.
  - *Section 2.8*: 1, 3, 5, 7, 11, 13, 15, 17, 19, 21, 23, 31, 33, 35, 39, **47**, 69.
- Complete by *January 28* in preparation for *Quiz #3*:
  - Review Chapters 1 and 2. Some helpful problems to work on:
    - \* *Chapter 1 Review*: 5, 7, 11, 13, 17, 19, 21, 23, 25, 27, 35, 37, 39, 49, 51, 53, 55, 57, 59, 61, 65, 69, 71, 81, 83, 85.
    - \* *Chapter 2 Review*: 1, 3, 5, 7, 9, 11, 13, 29, 31, 41, 43, 47, 48, 51, 53, 55, 63, 69, 71, 75, 77.
  - *Section 3.1*: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 43, 45.
  - *Section 3.2*: 1, 3, 5, 7, 9, 11, 17, 21, 23, 25, 27, 29, 31, 33, 37, 39, 41, 43, 51, 53.