

# CALCULUS B

INTERPHASE 2008

SYLLABUS

<http://www-math.mit.edu/~konvalinka/ip08.html>

## Lectures and Workshops

Lecture: MW 10:45am-12:15pm in 36-112 (Matjaž)

Workshops: M 2:50-4pm, F 10:45am-12:15pm, room 34-301 (Jaime) & 34-302 (Ismael)

## Teaching Staff

Matjaž Konvalinka (instructor)

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office hours T 8-9pm in front of 522 in Next House

Jaime Díaz (teaching assistant)

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office hours M 8-9pm (groups), M 9-10pm (individuals) in front of 522 in Next House

Ismael Olea (teaching assistant)

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office hours M 8-9pm (groups), M 9-10pm (individuals) in front of 522 in Next House

## Homework policy

There will be five problem sets, to be turned in at the beginning of lecture. We will accept late homework until noon the next day for at most half credit. We will not accept late homework for problem set 5. Students are encouraged to work with others, but each student must write up his or her own solutions. Students must list the names of all collaborators on the front page of the problem set.

## Exams

There will be one midterm exam and a final. The midterm will take place during the lecture period and will be one hour and a half long.

## Quizzes

There will be a quiz almost every Friday covering the material since the last quiz. These quizzes are meant to help you for both your problem sets and for your midterm and final.

## Textbook

Edwards & Penney

## Grading

25%	homework
10%	workshop participation
15%	quizzes
20%	midterm
30%	final exam

## Course Schedule

W	25 June	1. Functions, limits, continuity
M	30 July	2. Definition of a derivative, rules of differentiation I
W	2 July	3. Rules of differentiation II, max-min problems, <b>HW 1 DUE</b>
M	7 July	4. Sketching curves, related rates, implicit differentiation
W	9 July	5. Bisection, Newton's method, mean value theorem, <b>HW 2 DUE</b>
M	14 July	6. Linear approximation, Taylor polynomials and series
W	16 July	<b>MIDTERM EXAM, HW 3 DUE</b>
M	21 July	7. Techniques of antidifferentiation
W	23 July	8. Fundamental Theorem of Calculus, areas using integration
M	28 July	9. Exponential growth and decay, separable differential equations
W	30 July	10. Arc length, volume, surface area, <b>HW 4 DUE</b>
M	4 August	11. Polar coordinates
W	6 August	12. Course Review, <b>HW 5 DUE</b>
R	7 August	<b>FINAL EXAM</b>