

Calculus A, Math 10350, Fall 2005

1. TEXT

The textbook is *CALCULUS OF A SINGLE VARIABLE, eighth edition* by Larson, Hostetler and Edwards.

2. INSTRUCTORS

Panteleimon Eleftheriou (Room 217 HH, eleftheriou.1@nd.edu, Office Hours: Mondays 6:30 pm-8:30 pm or by appointment)

Matthew J. Gursky (Room 208 HH, mgursky@nd.edu, Office Hours: to be announced)

R. Juhlin (Room 204 HH, ljuhlin@nd.edu, Office Hours: Wednesday: 6pm-8pm)

Julie, T.-Y. Wang (Room 202 HH, jwang@math.sinica.edu.tw Office Hours: Mondays 7pm-9pm)

Pit-Mann Wong (Room 232 HH, wong.2@nd.edu, Office Hours: Wednesdays 8:00 pm-10:00 pm or by appointment)

3. TEACHING ASSISTANTS

E. Cabral Balreira (Room 219, HH, Eduardo.C.Balreira.1@nd.edu, Office Hours:)

Heather Hannah (Room 253A HH, hannah.5@nd.edu, Office Hours: Tuesdays 1pm-3pm or by appointment)

Bonnie Smith (Room 281 H smith.633@nd.edu, Office Hours:)

Jianfeng Zhu (Room 235 HH, Zhu.17@nd.edu, Office Hours: Wednesdays 6:30 pm - 8:30 pm)

4. GRADES

There will be three 75-min departmental examinations and a final departmental exam (the dates, times and locations are listed in the section on exam schedule and locations). Each of the 75-min exam is worth 100 points and the final exam is worth 150 points. There will be a total of 25 points for the weekly quizzes at the tutorial sessions and a total of 25 points for the homework assignments. The total possible points is 500. After each 75-min exam a letter grade will be assigned so you will know where you stand in relation to the rest of the students taking this course.

A student who misses an examination will receive zero points for that exam unless he or she has written permission from the Dean of the First Year of Studies. Please be aware that a travel plan is not considered to be a valid excuse by the Dean of the First Year of Studies so plan your travel for the semester break and the Thanksgiving Holidays now!

5. EXAM SCHEDULE AND LOCATIONS

Exam 1: 8:00 AM - 9:15 AM Tuesday, September 20, 2005

Exam 2: 8:00 AM - 9:15 AM Thursday, October 27, 2005

Exam 3: 8:00 AM - 9:15 AM Tuesday, November 29, 2005

Final Exam: 1:45 PM - 3:45 PM Friday, December 16, 2005

Instructor	Exam 1	Exam 2	Exam 3
Eleftheriou	HAYE 117	HAYE 117	HAYE 117
Gursky	HAYE 127	HAYE 127	HAYE 127
Juhlin	NIEU 123	NIEU 123	NIEU 123
Wang	DBRT 136	NIEU 127	NIEU 127
Wong	NIEU 118	NIEU 118	NIEU 118

Location of the Final Exam.

Eleftheriou HAYE 127

Gursky DBRT 140

Juhlin DBRT 138

J. Wang HAYE 117

P. Wong DBRT 131

Location of the Review Sessions for the Final Exam.

Room 107 Hesburgh Library Auditorium

December 15, 7-8 pm (Eleftheriou), 8-9 pm (Gursky)

6. CLASS DATES

There are 42 class days, M = 14, W = 15, F = 13.

First period (12 class days):

M	W	F
	8/24	8/26
8/29	8/31	9/2
9/5	9/7	9/9
9/12	9/14	9/16
9/19		

Topics: sections 1.1-1.5, sections 2.1-2.4

Exam 1 : 9/20 T 8:00 - 9:15 am

Second period (13 class days):

M	W	F
	9/21	9/23
9/26	9/28	9/30
10/3	10/5	10/7
10/10	10/12	10/14
	fall break	
10/24	10/26	

Topics: sections 2.5-2.6, sections 3.1-3.5

Exam 2: 10/27 TH 8:00 - 9:15 am

Third period (13 class days):

M	W	F
		10/28
10/31	11/2	11/4
11/7	11/9	11/11
11/14	11/16	11/18
11/21	11/23	Thanksgiving
11/28		

Topics: sections 3.6, 3.7, 3.9, sections 4.1-4.5

Exam 3: 11/29 T 8:00 - 9:15 am

Fourth period (4 class days)

M	W	F
	11/30	12/2
12/5	12/7	

FINAL EXAM: 12/16 Friday 1:45pm-3:45pm

7. HOMEWORK ASSIGNMENTS

It is very important to complete and hand in your homework assignments on time. Late homework assignments are not accepted without permission from the instructor. The main purpose of collecting and grading homework assignments is to let you know if you are doing the problems correctly. It is designed to reward effort. Each problem is graded either 0 (if there is not much evidence of effort) or 1 (for any honest attempt).

All examinations and homework are conducted under the University Honor Code. Examinations are closed book and are to be done completely by yourself with no assistance from others. Cooperation in doing homework assignments is permitted (and encouraged) but copying is not.

Number	Topic	Assignment
1	limits	p.55 #10, 12, 13, 16, 22, 23, 32, 33, 36, p.67 #12, 13, 16, 20
2	limits	p.67 #23, 26, 27, 28, 29, 31, 37, 40, 41, 43
3	limits + continuity	p.68 #49, 52, 53, 56, 57, 59, 60, 62, 67, 68, 77, 78, p. 78 # 1, 3, 4, 5
4	continuity	p.79 # 11, 12, 13, 17, 28, 29, 32, 34, 41, 43, 46, 57, 58, 63, 64, 77, 84
5	continuity + limits	p.81 #91, 92, 99, 100 p.88 #3, 6, 11, 15, 19, 27, 29, 30, 33, 36, 41, 43
6	derivative	p.88 #49, 50, 59, p.103 #3, 4, 7, 10, 11, 14, 17, 21, 23, 33, 37, 38, 39
7	derivative	p.106 # 81, 82, 85, 86, 91, 92, 99, 100, 101, 102, p.115 #4, 6, 8, 19
8	rate of change	p.115 #23, 27, 28, 42, 43, 45, 48, 49, 59, 62, 63, 66, 83-88, 93, 94, 108
9	product rule	p.126 #1, 3, 7, 9, 13, 16, 17, 18, 20, 23, 29, 39, 43, 52, 61, 62, 69, 71
10	chain rule	p.127 #83, 93, 95, 97, 129-134 p.137 #1, 2, 9, 13, 15, 25, 31, 44, 45, 47

Exam 1 : HW #1 - # 10.

Number	Topic	Assignment
11	implicit differentiation	p.137 # 53, 55, 57, 58, 79, 111, 112, p.142 #1, 3, 5, 11, 15, 21, 23
12	related rates	p.142 #25, 29, 76, 78, p.154 #1, 3, 5, 6, 12, 13, 16, 22, 27, 30, 31
13	extrema	p.156 #33, 35, 42, 45, p.169 #1, 3, 7, 8, 20, 23, 25, 28, 31, 33
14	extrema	p.170 # 39, 42, 43, 55-58, 60, 61, 63-67
15	mean value	p.176 #1, 4, 11, 15, 18, 23, 29, 37, 39, 53, 55, 56, 75, 78, 80(a)
16	increasing functions	p.186 #2, 3, 6, 7, 10, 13, 15, 21, 23, 31, 33, 35
17	increasing functions	p.187 #57, 59, 60, 62, 63, 64, 79, 87, 93, 95-100
18	concavity	p.195 #1, 3, 4, 7, 13, 15, 17, 19, 21, 23, 27, 29, 37, 39
19	concavity	p.195 # 42, 43, 47, 48, 50, 51, 53, 55, 68, 73, 79-83
20	limits at ∞	p.205 #1, 2, 3-8, 15, 17, 19, 26, 27, 29, 31, 33, 34, 41, 87, 88, 105

Exam 2: HW #11- #20

Number	Topic	Assignment
21	curve sketching	p.215 #1, 2, 3, 4, 5, 7, 9, 11, 19, 25
22	curve sketching	p.215 # 27, 30, 31, 54, 57, 67, 68
23	optimization	p.223 #2, 4, 5, 7, 9, 11, 14, 17, 19,
24	optimization	p.224 # 20, 22, 23, 24, 27, 29, 33, 49, 54, 58
25	linear approximation	p.233 #1, 5, 9, 13, 15, 35, 37, 41-44, p.240 #1, 4, 5, 9, 13, 27, 29
26	antiderivatives	p.255 #1, 7, 9, 11, 15, 22, 23, 27, 29, 33, 35, 39, 41, 55, 62, 67, 68, 69
27	area	p.267 #1, 3, 5, 7, 9, 11, 13, 17, 25, 29, 31, 33, 39, 41, 47, 49, 63, 64
28	Riemann sum	p.278 #1, 3, 7, 9, 11, 15, 17, 19, 21, 27, 29, 31, 33, 43, 47, 63-68
29	FTC	p.291 #11, 21, 25, 27, 29, 35, 38, 41, 43, 45, 55-59, 69, 72, 81, 87, 89, 91
30	substitution	p.304 #1, 3, 5, 6, 9, 11, 15, 19

Exam 3: HW #21- #30

Number	Topic	Assignment
31	substitution	p.297 # 23, 27, 31, 41, 45, 49, 51, 53, 57, 61, 65, 67, 75, 77, 87, 89, 91

Final Exam: HW #1- #31

Exam Grades

Exam I

90 A 80 B 65 C 50 D

Exam II

85 A 72 B 55 C 40 D

Exam III

88 A 72 B 52 C 38 D