

## Calculus B, Math 10360, Spring 2006

### 1. TEXT

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

### 2. INSTRUCTORS

M. Gursky (Room 208 HH, Matthew.J.Gursky.1@nd.edu, Office Hours: to be announced)  
R. Hind (Room 216 HH hind.1@nd.edu, Office Hours: to be announced)  
M. Schmoll (Room 206 HH, Martin.J.Schmoll.2@nd.edu, Office Hours to be announced)  
P.-M. Wong (Room 232 HH, wong.2@nd.edu, Office Hours: W 7:00-9:00 pm)

### 3. TEACHING ASSISTANTS

E. C. Balreira (Room 219 HH, Balreira.1@nd.edu, Office Hours: to be announced)  
P. Bihani (Room 221 HH, pbihani@nd.edu, Office Hours: to be announced)  
K. Chailuek (Room 253B HH, chailuek.1@nd.edu, Office Hours to be announced)  
R. Jensen (Room 219 HH, rjensen2@nd.edu, Office Hours to be announced)  
F. Qi (Room 253B HH, qi6@nd.edu, Office Hours to be announced)  
B. Smith (Room 281 H, smith.633@nd.edu, Office Hours to be announced)  
J. Zhu (Room 217 HH, zhu.17@nd.edu, Office Hours : 7-9pm Wednesdays)

### 4. GRADES

There will be three one-hour 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 one-hour 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 one-hour 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 Easter Holidays now!

### 5. EXAM SCHEDULE AND LOCATIONS

Exam 1: 8:00 AM - 9:15 AM Thursday, February 16, 2006  
Exam 2: 8:00 AM - 9:15 AM Thursday, March 23, 2006  
Exam 3: 8:00 AM - 9:15 AM Tuesday, April 25, 2006  
Final Exam: 1:45 PM - 3:15 PM Monday, May 8, 2006  
Rieview sessions for the 3 tests: Feb. 15, March 22, April 24, 7-9 pm in ?

Instructor	Exam 1	Exam 2	Exam 3
Hind 01	NIEU 127	NIEU 127	NIEU 127
Gursky 02 + 05	DBRT 141	DBRT 141	DBRT 141
Wong 03	NIEU 118	NIEU 118	NIEU 118
Schmoll 04	NIEU 123	NIEU 123	NIEU 123

Final Exam Location: Hind, Schmoll and Wong Room 102 DBRT, Gursky: Room 140 DBRT

## 6. REVIEW SESSIONS

Feb 15, DBRT 101, 7-9 pm  
 March 22, DBRT 101, 7-9 pm  
 April 24, DBRT 101, 7-9 pm  
 May 7, DBRT 101, 7-9 pm

## 7. CLASS DATES

There are 41 class days, M = 13, W = 15, F = 13.

First period (13 class days):

M	W	F
	1/18	1/20
1/23	1/25	1/27
1/30	2/01	2/03
2/06	2/08	2/10
2/13	2/15	

Exam 1 : 2/16 Th 8:00 - 9:15 am

Second period (12 class days):

M	W	F
		2/17
2/20	2/22	2/24
2/27	3/01	3/03
3/06	3/08	3/10
	Spring Break	
3/20	3/22	

Exam 2: 3/23 TH 8:00 - 9:15 am

Third period (12 class days):

M	W	F
		3/24
3/27	3/29	3/31
4/03	4/05	4/07
4/10	4/12	Easter
Easter	4/19	4/21
4/24		

Exam 3: 4/25 T 8:00 - 9:15 am

Fourth period (4 class days)

M	W	F
	4/26	4/28
5/01	5/03	

FINAL EXAM: 5/8 M 1:45 -3:45 pm

## 8. 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.

Exam 1: HW # 1- 12

Exam 2: HW # 13- 21

Exam 3: HW # 22- 30

Final Exam: HW #1-31

#	Topic	Assignment
1	natural log	p.329 #7, 8, 9, 10, 17, 20, 21, 23, 25, 26, 31, 34, 45, 48, 49, 53
2	natural log	p.330 #57, 63, 65, 70, 71, 73, 79, 99, 101 p. 338 #1, 7, 9, 19, 20, 29, 30, 33, 35, 49, 52
3	inverse	p.339 #68, 83, 85 p.347 # 1, 3, 5, 9, 11, 12, 45, 47, 51, 64, 65, 67, 69, 71, 73, 77, 79
4	exponential	p.348 #87, 89, 95, 101-104, 108 p.356 # 5, 7, 9, 11, 13, 15, 18, 21-24, 27, 28, 41, 44, 45
5	exponential	p.358 # 48, 55, 57, 87, 89, 91, 93, 95, 97, 99, 101, 105, 126
6	bases	p.366 #1, 2, 5, 7, 15, 19, 22, 23, 25, 30, 37, 39, 43, 45, 50, 55, 61, 63, 65, 67, 81, 85, 87
7	inverse trig.	p.377 # 5, 9, 17, 18, 21, 25, 31, 33, 41, 45, 49, 53, 54, 59, 61, 71, 83-88, 89, 91
8	inverse trig.	p.383 # 1, 3, 5, 11, 15, 21, 25, 31, 35, 39, 43, 46, 47-50, 75-78
9	diff. eq.	p.409 # 3, 5, 8, 9, 11, 13, 18, 19, 26, 33, 41, 43, 45, 53-56,
10	diff. eq.	p.418 # 1, 3, 9, 11, 13, 14, 33, 35, 38, 39, 41, 42, 43, 45, 47, 57, 62
11	diff. eq.	p.429 # 11, 17, 20, 22, 35, 37, 39, 41, 75, 77, p.438 5, 9, 13, 19, 23, 25, 29, 43, 45, 49
12	Area	p.452 #3, 6, 17, 21, 24, 25, 43, 47, 94
13	disk method	p.463 #2, 5, 6, 7, 10, 11, 13, 21, 27, 31, 47-51, 62, 63, 65
14	shell method	p.472 #1, 2, 3, 4, 5, 7, 13, 14, 15, 16, 19, 21, 43, 54
15	arc length	p.483 #3, 5, 7, 9, 33, 34, 39, 40, 41, 51, 52, 53, 55
16	work done	p.493 # 1, 3, 7, 9, 10, 11, 12, 17, 18, 21, 22, 23, 31, 32, 33, 34
17	center of mass	p.504 #3, 5, 7, 9, 13, 15, 27, 33, 36, 43, 45, 49, 51
18	pressure	p.510 #1, 3, 5, 8, 21, 22, 25, 26
19	integration	p.522 #1, 3, 5, 11, 12, 13, 14, 25, 33, 35, 37, 39, 41, 57, 59
20	by parts	p.531 # 1, 2, 3, 4, 5, 7, 9, 15, 17, 19, 27, 35, 51, 53, 55, 89-94
21	trig integrals	p.540 # 5, 8, 9, 11, 13, 15, 19, 23, 25, 27, 29, 31, 35, 51, 53, 95-98
22	trig substitution	p.549 #1, 2, 3, 4, 5, 9, 15, 59, 60, 67
23	partial fractions	p.559 #1, 2, 3, 4, 5, 6, 7, 11, 13, 15, 18, 21
24	l'Hopital's rule	p.574 # 5, 7, 8, 9, 15, 16, 18, 21, 27, 33, 37, 39, 41, 43, 45, 51, 59, 85
25	improper integrals	p.585 #1, 2, 3, 4, 5, 6, 17, 19, 23, 25, 91
26	sequences	p.602 # 3, 7, 9, 13, 25, 27, 29, 31, 33, 35, 47, 53, 55, 61, 63, 67, 71, 73, 78
27	series	p.612 #1, 3, 5, 7, 9, 11, 35, 37, 39, 41, 45, 47, 49, 51, 53, 59, 67, 117-122
28	convergence test	p.620 #1, 3, 29, 35, 36, p.628 #3, 9, 11, 15, 23 #13, 15, 17, 19, 31, 35, 37, 42
29	convergence test	p.636 #11, 17, 19, 47, 53, 55 57, p.645 #13, 15, 17, 19, 31, 35, 37, 42
30	Taylor polynomials	p.656 #1, 2, 3 4, 13, 17, 19, 25, 29, 41, 43, 45, 46
31	power series	p.666 #11, 15, 17, 19, 29, 32, 35, 37, p.674 #5, 7, 9, 17, 19, 21, 23

$$A \geq 85, 65 \leq B \leq 84, 45 \leq C \leq B, 30 \leq D \leq 44, F \leq 29$$