

MATH 1342

FALL 2009

CALCULUS II for Engineering, Science, and Math

Instructor: Piper Harris, paharris@princeton.edu

Office: 540A NI, 373-5530 (math dept office: 373-2450)

“Office” Hours: M,W,Th 10:30am – 11:30am, RY food court

Required Materials:

Text: *Calculus Concepts and Contexts* (volume 1), 4th edition by James Stewart
ISBN-13: 978-1-4266-4266-2

and *Calculus Concepts and Contexts* (volume 2), 4th edition by James Stewart
ISBN-13: 978-1-4266-3266-2

Calculator: scientific, graphing calculator (TI-83 recommended)

Course Objectives:

This course is a continuation of the subject of Calculus, following the material covered by Math 1340/1341. We will study **Integral Calculus** and discuss some of its applications as well as **infinite series**, **power series**, and the beginnings of **vector calculus** in 2 and 3 dimensions .

Note the following dates:

1. Wednesday, September 9: Fall classes begin.
2. Wednesday, September 23: Last day to file a final exam conflict form.
3. Friday, September 29: Last day to drop a Fall class without a ‘W’ grade.
4. Monday, October 12: **Columbus Day, no classes**
5. Wednesday, November 11: **Veteran’s Day, no classes**
6. November 25-29: **Thanksgiving Recess, no classes**
7. Friday, November 20: Last day to drop a Fall class with a ‘W’ grade.
8. Wednesday, December 9: **Last day of classes.**
9. Thursday, December 10: Reading Day
10. December 11-18: **Final Exam Period**

Course Policies:

1. There will be weekly quizzes (usually during the first 20 minutes of the class). The two lowest quiz grades will be dropped. There will be no make-up quizzes. If you miss a quiz for any reason, the next quiz in the sequence will be counted an extra time to replace the missing grade.
2. There will be a midterm exam on the material indicated on the last page of the syllabus. There are no make-up exams. If you miss an exam, your final exam grade will be counted an extra time to replace the missing grade.

3. Homework will be assigned at each class and discussed in the next class if needed. You are expected to keep up with the homework in order to perform well on the weekly quizzes. The homework will, however, be collected but not graded and used to determine a student's grade if he or she is on the borderline of two grades.
4. Your grade in the course will be determined as follows:

Quizzes: 30%
 Midterm Exam: 30%
 Final Exam: 40%

and you will be graded according to the following scale:

Final Average	Grade for Course
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
67-69	D+
63-66	D
60-62	D-
0-59	F

ACADEMIC HONESTY

The University views academic dishonesty as one of the most serious offenses that a student can commit while in college and imposes appropriate punitive sanctions on violators. Cheating on a quiz or exam will not be tolerated.

Notes:

It is your responsibility to be aware of any changes the instructor may make to the syllabus as they are announced in class. Students are responsible for all information given when they are absent.

If you have a concern about the course or the instructor that is not or cannot be resolved by speaking with the instructor, the next step is to speak with Robert Lupi (course coordinator), 541NI, x5534, r.lupi@neu.edu.

It is University policy that no grade, including an incomplete, can be changed after one year. Exceptions must be authorized by the Academic Standing Committee.

You must attend the final exam. Do not make any travel plans until you know when your exams are to be given, and do not expect that you will be allowed to take the exam at any other time than when it is regularly scheduled, except in the case of a Registrar-created conflict, such as two exams at the same time or three finals in one day. If you miss the final, you will receive a grade of zero and you will fail the course.

You should always **turn off your cell phone** when entering a class as a courtesy to everyone else.

SYLLABUS

TOPIC	HOMEWORK
5.5 Integration by Substitution	1. page 381 #1-7,11-16,19,22,24,32,34,41,47,48,54,55
5.6 Integration by Parts	2. page 387 #1-4,6,11,17,19,21,25,29
5.7 Techniques of Integration	3. page 393 #1-6; 23-26; 29
5.9 Numerical Integration	4. page 411 #7(a,c),8(a,c),16(a,c)
5.10 Improper Integrals	5. page 421 #1,2,5,9,13,19,27,29,51
6.1 Area Between Curves	6. page 436 #1-8,11
6.2 Volumes by Cross Sections	7. page 446 #1-7,17,18
6.3 Arc Length	8. page 458 #1,3-8
6.5 Work	9. page 472 #1,3,4,7,13,15,17-19

***** **MIDTERM EXAM UP TO HERE** *****

8.1 Sequences	10. page 562 #3,5,7,9,11,13-16,22,23,45,48
8.2 Infinite Series	11. page 572 #11-23 odd,31,41
8.3 Integral and Comparison Tests	12. page 583 #3,4,6-9,11-13,17,19,21,22
8.4 Other Convergence Tests	13. page 591 #2,14,15,21,23,27,33,41
8.5 Power Series	14. page 597 #3,5,7,10,15,19
8.6 Functions as Power Series	15. page 603 #1-5,11,23,27
8.7 Taylor and Maclaurin Series	16. page 616 #3-5,7,9,13,15,17,25,29,43,50,65
9.1 3-D Coordinates	17. page 638 #1,3,8,13,33
9.2 Vectors	18. page 646 #4,15,17
9.3 Dot Products	19. page 653 #3,5,7,9,15,17,21,30,31,37,39
10.1 Vector Functions and Curves	20. page 699 #1,3,9,15
10.2 Derivatives and Integrals	21. page 706 #3,5,9,11,17,18
10.3 Normals and Lengths	22. page 714 #1,5,45
10.4 Motion in Space	23. page 724 #3,7,9,10,13-17

Review and Cumulative Departmental Final Exam