

MTHU1342: CALCULUS II for Engineering, Science, and Math

Time: Tuesday, Wednesday, Friday: 3:25 p.m. to 4:30 p.m.

Classroom: 105, Cullinane Building

Instructor Info:

Name: Kavita Sutar; Office: 534 Nightingale Hall ; email: sutar.k@neu.edu

Office hours: Tuesdays 10:00 to 11:30 a.m. & Wednesdays 1:30 to 3:00 p.m.

If you want to see me, but cannot do so during my office hours, then please see me before or after any class to set up a convenient time. Also, please take advantage of the office hours of the other instructors in the course when they are more convenient.

Class material:

- **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.

Important dates:

Wednesday, September 9	Fall classes begin
Wednesday, September 23	Last day to file a final exam conflict form
Friday, September 29	Last day to drop a Fall class without a 'W' grade
Monday, October 12	Columbus Day, no classes
Wednesday, November 11	Veteran's Day, no classes
November 25-29	Thanksgiving Recess, no classes
Friday, November 20	Last day to drop a Fall class with a 'W' grade
Wednesday, December	Last day of classes
Thursday, December 10	Reading Day
December 11-18	Final Exam Period

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

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. The instructor reserves the right to make changes to the syllabus if necessary. It is the responsibility of each student to stay abreast of what happens in the classroom, changes in the assigned exercises and changes in the dates of quizzes or exams.
5. Your grade in the course will be determined as follows: Quizzes: 30% ; Midterm Exam: 30%; Final Exam: 40%; you will be graded according to the following scale:

Final Average	Grade
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

Final Exam: Two hours, required of all: Time and room TBA.

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.

Contact the Registrar's office in first 2 weeks of class if you have a conflict, or 3 finals in one day.

To talk to someone else:

Course coordinator: Robert Lupi; email: r.lupi@neu.edu

Free tutoring: Mathematics Tutorial Center, 540B Nightingale (x2328). All tutoring is done on a first come first served basis. Students must come in person to schedule appointments. Tutoring hours: Mon-Wed 10am-9pm, Thurs 10am-6pm and Fri 10-1. The full schedule will begin Monday, Sept 21.

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.

Student Code of Conduct: See

<http://www.northeastern.edu/osccr/academichonesty.html>

or Student Handbook 2007-2008 p. 38-39. ” Essential to the mission of Northeastern University is the commitment to the principles of intellectual honesty and integrity. Academic integrity is important for two reasons. First, independent and original scholarship ensures that students derive the most from their educational experience and the pursuit of knowledge. Second, academic dishonesty violates the most fundamental values of an intellectual community and depreciates the achievements of the entire University community. Accordingly, Northeastern University views academic dishonesty as one of the most serious offenses that a student can commit while in college.” The website/handbook goes on to detail examples.

Academic dishonesty on a quiz or exam, or assignment leads to a zero on the quiz or exam or assignment, that cannot be made up, as well as a letter detailing the incident to the Office of Student Conduct and Conflict Resolution. The minimum penalty for a finding of academic dishonesty by the student Judicial Hearing Board includes one year disciplinary probation.

SYLLABUS

TOPIC

5.5 Integration by Substitution
5.6 Integration by Parts
5.7 Techniques of Integration
5.9 Numerical Integration
5.10 Improper Integrals
6.1 Area Between Curves
6.2 Volumes by Cross Sections
6.3 Arc Length
6.5 Work
8.1 Sequences
8.2 Infinite Series
8.3 Integral and Comparison Tests
8.4 Other Convergence Tests
8.5 Power Series
8.6 Functions as Power Series
8.7 Taylor and Maclaurin Series
9.1 3-D Coordinates
9.2 Vectors
9.3 Dot Products
10.1 Vector Functions and Curves
10.2 Derivatives and Integrals
10.3 Normals and Lengths
10.4 Motion in Space

HOMEWORK

1. page 381 #1 – 7, 11 – 16, 19, 22, 24, 32, 34, 41, 47, 48, 54, 55
2. page 387 #1 – 4, 6, 11, 17, 19, 21, 25, 29
3. page 393 #1 – 6; 23 – 26; 29
4. page 411 #7(a, c), 8(a, c), 16(a, c)
5. page 421 #1, 2, 5, 9, 13, 19, 27, 29, 51
6. page 436 #1 – 8, 11
7. page 446 #1 – 7, 17, 18
8. page 458 #1, 3 – 8
9. page 472 #1, 3, 4, 7, 13, 15, 17 – 19
10. page 562 #3, 5, 7, 9, 11, 13 – 16, 22, 23, 45, 48
11. page 572 #11 – 23(*odd*), 31, 41
12. page 583 #3, 4, 6 – 9, 11 – 13, 17, 19, 21, 22
13. page 591 #2, 14, 15, 21, 23, 27, 33, 41
14. page 597 #3, 5, 7, 10, 15, 19
15. page 603 #1 – 5, 11, 23, 27
16. page 616 #3 – 5, 7, 9, 13, 15, 17, 25, 29, 43, 50, 65
17. page 638 #1, 3, 8, 13, 33
18. page 646 #4, 15, 17
19. page 653 #3, 5, 7, 9, 15, 17, 21, 30, 31, 37, 39
20. page 699 #1, 3, 9, 15
21. page 706 #3, 5, 9, 11, 17, 18
22. page 714 #1, 5, 45
23. page 724 #3, 7, 9, 10, 13 – 17

(Midterm - upto & including section 6.5)