

MA 141: Calculus I

Fall 2020

Online

Instructor: E. Dempster**Office:** SAS 3250**Email:** ejdempst@ncsu.edu

Course Description: (4 credit hours) First of three semesters in a calculus sequence for science and engineering majors. Functions, graphs, limits, derivatives, rules of differentiation, definite integrals, fundamental theorem of calculus, applications of derivatives and integrals. Credit is not allowed for both MA 141 and MA 121 or MA 131.

Textbook: Calculus for Scientist and Engineers; by Franke, Griggs and Norris. The pdf of the textbook is in your purchased Webassign for the course. The homework in Webassign correlates to the exercises in this textbook.

Attendance and Participation Policy: Attendance will be taken during recitation. You are expected to attend and participate in recitation.

Homework: The Webassign must be purchased at webassign.ncsu.edu. It has both the assignments and the textbook.

In-class tests: We will have 3 tests.

Test 1: Thursday, September 10th

Test 2: Thursday, October 15th

Test 3: Thursday, November 5th

If an in-class test is missed with an excused absence (i.e. for a university-approved reason, with supporting documentation), then a make-up test will be scheduled individually. If an in-class test is missed for an unexcused absence, that test will be given a score of 0. No make-ups will be allowed. Documentation for an excused absence must be provided within 1 week of the missed test. All absences that require a make up test or other special accommodations must go through the NCSU absence verification process; here is the link to that office
<https://dasa.ncsu.edu/students/absence-verification-process/>

Final Exam: The final exam will be held according to NCSU calendar.

Grade Disputes: Answer keys for all tests will be posted on Moodle when the exams are returned in class. If a grading error is found after looking at the posted answer key then you should **provide a written explanation of the error, attached to the original test, to the instructor within 1 week.** Do not alter the original work. The entire test may be re-graded and the test grade is subject to remain the same, increase or decrease at the discretion of the instructor.

Grading: Your grade will be determined by the following break down:

Homework: 10%

In-Class Tests: 60% (20% each)

Final: 30%

General Class Expectations:

1. I expect you to come to class ready to work and be engaged in the material for that day. If you can, please read the section from the text before class. Start working exercises in the text section or also start the Webassign exercises.
2. Check your email and Moodle site regularly. Any announcement made by email is saved under announcements on our Moodle page.
3. Be **respectful and professional**. Via email, please identify yourself and the class clearly. Treat everyone in class (other students and myself) with respect and courtesy. In class, be active and engaged and come prepared. In office hours, be prepared to ask questions and work with others that are in the office hours time too.
4. Be accountable for your own education. You are responsible for resolving confusion about assignments, due dates, exam dates, accommodations, etc.
5. Do not submit work that is not yours. **It is understood that your name or signature on any assignment or attached to any online submission indicates your adherence to the NC State Honor Pledge: "I have neither given nor received unauthorized aid on this test or assignment."**
6. **No graphing calculators or cell phones or other devices that go to the internet** are allowed during tests and exams. You may have a simple non-graphing calculator. It is an honor code violation if you use a graphing calculator on an exam. It is also an honor code violation to access the internet in any way (phones, watches, etc) during an exam.

Disability Services: Reasonable accommodations will be made for students with verifiable disabilities. To receive accommodations, students must register with Disability Services for Students at 1900 Student Health Center, Campus Box 7509, 919-515-7653. Here is their link: <https://dro.dasa.ncsu.edu/> Please see the Academic Accommodations for Students with Disabilities Regulations (REG02.20.1). You must discuss accommodations with me *prior* to a test date.

Date	Text Section	Topic
Week 1	Sec .3, .4 and 1.1	Functions, parametric and limits
Week 2	1.2 , 1.3 and 1.4	Limits, Continuity, Instantaneous velocity
Week 3	Sec 2.1, 2.2 and 2.3	Def'n of derivative and rules
Week 4	Sec 2.4 and 2.5	Deriv. of Trigs and Chain Rule
Week 5	Review, 2.6	Test #1
Week 6	Sec. 2.6 and 2.7	Implicit Differentiation and Related Rates
Week 7	Sec 3.1 and 3.2	Local and absolute extrema ; Extreme Value Theorem
Week 8	Sec. 3.3 and 3.4	Shapes of graphs; Optimization
Week 9	Sec. 3.5 and 3.6	L'Hopital's Rule and Differentials
Week 10	Review, 4.1	Test #2
Week 11	Sec. 4.2 and 4.3	Definition of definite integral and Fund. Thm. of Calculus
Week 12	Sec 4.4 and 4.5	Integration by Substitution and Integration by Substitution
Week 13	Review , 5.1	Test #3
Week 14	Sec. 5.2	Volumes of revolution
Week 15	Exam week	