
MA 151 Course Syllabus

MA 151 – Calculus for Elementary Education I, Spring 2019, 3 credit hours

A. Course Description

Calculus for Elementary Teachers (I & II) is a two-semester course designed specifically for the Elementary Education Program at North Carolina State University. It arises from a demand by both pre-service elementary teachers and their professors to find mathematics that is demanding and high level cognitively, but will be useful to students in their future occupation. During the Fall Semester the course covers the second half of Calculus. These two semesters that you'll have completed count as a regular calculus course; at the same time, students will gain a deeper understanding of mathematics in general and of the content of elementary school mathematics in particular. Students will be active in their learning, tying the calculus ideas to science and engineering, using technology, writing about their thinking, and learning to work cooperatively with others. The following units will be covered:

- *Differentiation (review and continuation)*
- *Application of the Derivative*
- *Integration*
- *Differential Equations*

B. Instructor Information

Nate Jewkes – *Instructor*

Email: njewkes@ncsu.edu

Office Location: Poe Hall 502A

Office Hours: TBA or by appointment

C. Course Meetings

MA 151 – 001:

Days: TR

Time: 8:30-9:45am

Campus: Main

Location: Daniels 0232

Final Exam: Tuesday, April 30th, 8:00-11:00am

D. Course Materials

Textbooks: None

Materials: Reading materials will be provided by the instructor in Moodle.

Optional Materials: Calculator. Graphing calculators are permitted, but a scientific calculator is sufficient. No phone calculators will be allowed on exams.

E. Prerequisites and Restrictions

Prerequisites

C- or better in MA 107 or MA 111, or 520 or better on the SAT Subject Test in Mathematics Level 2 or the NCSU Math Skills Test, or 2 or better on an AP Calculus exam.

Restrictions

Credit is not allowed for both MA 131 and MA 121 or MA 141. Elementary Education Majors Only.

F. Learning Outcomes

By the end of this course, students in Calculus for Elementary Teacher will:

1. Participate in learning tasks that focus on different approaches to introduce and work with concepts of calculus. Actively learn mathematics that is based in calculus, but also supports elementary mathematics.
2. Work hard, in class and out; working together with others well and by themselves with determination.
3. Work hard at understanding the *why* of the mathematics and not just the how.
4. Use technology when appropriate to further their own understanding and to prepare for using technology when they become teachers.
5. Learn about rate of change, function, derivative and integrals, both from a conceptual and a computational perspective.
6. Enhance their problem solving skills and work on interpreting the mathematics in a real context and vice versa.

G. Grading

Grade Components

Component	Weight
Two Term Tests	40% (20% each)
Homework	30%
Class Participation	5%
Final Exam	25%

The Term Tests are closed book, closed notes. No re-tests will be given. If you miss a test because of an undocumented or unexcused absence, a zero will be entered for that test grade. All test answer keys will be posted on Moodle once the test has been graded and handed back.

The Final Exam is mandatory and cumulative. The only way to take the final exam at another time is to request a change through the Department of Registration and Records, 100 Harris Hall.

Homework is an important part of the course. Most of your learning will take place while doing it. Students will complete and submit homework weekly (as noted on the schedule). The submitted coursework is expected to be clear, with full justification. All homework answer keys will be posted on Moodle once the homework has been graded and handed back.

Class Participation is an important part of the course. Students are expected to show up to class prepared as well as engage in class discussions and group assignments. Attendance will be taken at each class session, and all students will gain 5 points for participating fully in each class session. Points will be removed for students engaging in disruptive behavior, not participating, or by having an unexcused absence.

Letter Grades

This Course uses Standard NCSU Letter Grading:

Letter Grade	Points	What this grade means
A+	97% - 100%	Demonstrated the highest level of mastery of concepts and reflection, including the ability to apply many of these concepts to real situations
A	93% - 96%	
A-	90% - 92%	
B+	87% - 89%	Demonstrated mastery and ability to apply at least some of these concepts to real situations
B	83% - 86%	
B-	80% - 82%	
C+	77% - 79%	Demonstrated mastery of basic concepts
C	73% - 76%	
C-	70% - 72%	
D+	67% - 69%	Demonstrated minimal mastery of topics
D	63% - 66%	
D-	60% - 62%	
F	< 60%	Failed to demonstrate mastery of any topics

Requirements for Credit-Only (S/U) Grading

In order to receive a grade of S, students are required to take all exams and quizzes, complete all assignments, and earn a grade of C- or better. Conversion from letter grading to credit only (S/U) grading is subject to university deadlines. Refer to the Registration and Records calendar for deadlines related to grading. For more details refer to <http://policies.ncsu.edu/regulation/reg-02-20-15>.

Policies on Incomplete Grades

If an extended deadline is not authorized by the instructor or department, an unfinished incomplete grade will automatically change to an F after either (a) the end of the next regular semester in which the student is enrolled (not including summer sessions), or (b) the end of 12 months if the student is not enrolled, whichever is shorter. Incompletes that change to F will count as an attempted course on transcripts. The burden of fulfilling an incomplete grade is the responsibility of the student. The university policy on incomplete grades is located at <http://policies.ncsu.edu/regulation/reg-02-50-3>.

Late Assignments

- If a student has an *anticipated* University approved excused reason for missing class, any assignments due that day are required to be turned in on time (or another negotiated time) either electronically or in print.
- If a student has an *unanticipated* University approved excused reason for turning in an assignment late, they will not be penalized if the assignment is turned in within one week of receiving the assignment (or another negotiated time).
- If the late assignment is *unexcused*, it will result in an automatic 10% reduction in the grade on that assignment the first day late. After the first day, an additional 5% will be deducted for each day the assignment is not turned in.
- After 3 unexcused late assignments, late work will no longer be accepted.

Test Make-up Policy

All anticipated absences must be excused in **advance** of the test date. These include university duties or trips (certified by an appropriate faculty or staff member), required court attendance (certified by the Clerk of Court), or religious observances (certified by the Department of Parent and Family Services 515-2441). Emergency absences must be reported as soon as possible once returning to class and must be appropriately documented (illness by an attending physician or

family emergencies by Parent and Family Services on the date of the absence). If you are sick on a test day and decide not to come to class, go to the health center or other medical facility. Students who miss a test and have a university-approved excuse must submit appropriate documentation. If you obtain an unexcused absence on a test day the test cannot be taken.

H. Attendance Policy

For complete attendance and excused absence policies, please see <http://policies.ncsu.edu/regulation/reg-02-20-03>

Elementary Education Attendance Policy

Candidates in the NCSU Elementary Education Program are part of a community of pre-service educators who LEAD and SERVE in both the university setting and in the public schools. Candidates are no longer traditional college students and therefore are expected to exhibit professional behavior, which will lead to preparation for employment. Professional behavior includes attendance at all classes. If candidates will miss class, they should send an email message to the instructor indicating a reason for the absence before class or within 12 hours of missing class. The reason for the missed class may or may not be considered an **excused** absence. The university policy on what constitutes an excused absence follows:

Excused Absences: Only **three excused absences** will be permitted for any course. (Read below 3.6 to address what happens if there are more than three excused absences). If the student has **more than** three *excused* absences (anticipated or not), the student will need to have a *formal review* with the professor, department head, and/or academic dean in order to be permitted to continue with the class. Students shall receive excused absences for the following:

3.1 Anticipated Absences. Excuses for anticipated absences must be cleared with the instructor before the absence. Examples of anticipated situations where a student would qualify for an excused absence are:

3.1.1 The student is away from campus representing an official university function, e.g., participating in a professional meeting, as part of a judging team, or athletic team. These students would typically be accompanied by a University faculty or staff member.

3.1.2 Required court attendance as certified by the Clerk of Court.

3.1.3 Students will be allowed a minimum of two excused absences per academic year for religious observances as verified by the Division of Academic and Student Affairs (DASA) (Park Shops, 919-515-3037). For more information about a variety of religious observances, visit the Diversity Calendar.

3.1.4 Required military duty as certified by the student's commanding officer.

Other anticipated absences can be determined through negotiations with the professor prior to the absence.

3.2 Unanticipated Absences. Excuses for emergency absences must be reported to the instructor as soon as possible, but not more than one week after the return to class. Evidence of an emergency absence is REQUIRED. Examples of emergency absences are:

3.2.1 Short-term illness or injury affecting the ability to attend or to be productive academically while in class, or that could jeopardize the health of the individual or the health of the classmates attending. Students must notify instructors prior to the class absence, if possible, that they are temporarily unable to attend class or complete assignments on time. An attending physician should also document short-term illnesses.

3.2.2 *Death or serious illnesses in the family when documented appropriately. An attempt to verify deaths or serious illness will be made by the Office of the Vice Provost for Academic Services & Programs in the Division of Academic & Student Affairs (Park Shops, 919-515-3037).*

3.5 When excused absences are accepted, the instructor shall hold all students with excused absences to the same standard for making up missed assignments or examinations. (*See below for policies on make-up assignments for Elementary Education students.*)

3.6 In a case where the student realizes in the first two weeks of class that the anticipated number of absences will exceed the number of excused absences permitted in the course, the student shall discuss the situation with the instructor, the student's adviser, or the academic dean in the college in which the student is enrolled. It is anticipated that a suitable resolution shall occur before the end of the second week of the semester.

Unexcused Absences: An unexcused absence is any absence that does not fall in one of the above cases (anticipated absences negotiated with the professor or excused absences such as illness, death, or unanticipated events for which there is evidence). No participation points for a given day will be awarded if a student has an unexcused absence. (*See above for policies on make-up assignments and deductions for Elementary Education.*) If a student has more than three *unexcused* absences, he or she fails the course.

Tardiness: A student is considered late to class if they show up after attendance has been taken. If the student shows up late to class points will be deducted from the overall participation grade for each tardy. If a student is habitually late to class a meeting will be held with the instructor.

I. Other Course Policies

1. Prospective teachers are also expected to demonstrate appropriate classroom demeanor by not using cell phone, email, instant messaging, other communication devices, or playing games during classes. In case the course instructor considers the classroom engagement or demeanor of a student inappropriate, the prospective student will first receive a warning. If the behavior persists, the student will lose one classroom participation point for each subsequent infraction.
2. All correspondence about issues related to the course should be sent to your instructor with a title that starts with "MA 151" and then the reason for the email. I will reply within 24-48 hours.
3. Your email address registered with the NCSU online directory will be used for announcements associated with this class. It is your responsibility to maintain a valid email address and check/empty your inbox regularly.
4. The term grades (tests, hand-in assignments) will be recorded in the grade book in Moodle. Please notify me immediately if you notice any discrepancies in your grades. Keep all your homework assignments and tests for future reference.

J. Academic Integrity

Academic Integrity

Students are required to comply with the university policy on academic integrity found in the Code of Student Conduct found at <http://policies.ncsu.edu/policy/pol-11-35-01>. Both faculty and students at North Carolina State University have a responsibility to maintain academic integrity. An informational brochure about academic integrity is available from the university and students are encouraged to obtain a copy.

Academic Honesty

See <http://policies.ncsu.edu/policy/pol-11-35-01> for a detailed explanation of academic honesty.

"Academic dishonesty is the giving, taking, or presenting of information or material by a student that unethically or fraudulently aids oneself or another on any work which is to be considered in the determination of a grade or the completion of academic requirements or the enhancement of that student's record or academic career." (NCSU Code of Student Conduct)

Scholarly activity is marked by honesty, fairness and rigor. A scholar does not take credit for the work of others, does not take unfair advantage of others, and does not perform acts that frustrate the scholarly efforts of others. The violation of any of these principles is academic dishonesty.

Penalties for a violation: For the first violation, you will receive a zero for your work and be put on academic integrity probation for the remainder of your stay at NCSU. The second violation may result in your suspension from NCSU. Both situations will involve the Office of Student Conduct. See the website for a full explanation:

http://www.ncsu.edu/policies/student_services/student_discipline/POL11.35.1.php

Honor Pledge

Your signature on any test or assignment indicates, "I have neither given nor received unauthorized aid on this test or assignment."

K. Electronically-Hosted Course Components

Students may be required to disclose personally identifiable information to other students in the course, via electronic tools like email or web-postings, where relevant to the course. Examples include online discussions of class topics, and posting of student coursework. All students are expected to respect the privacy of each other by not sharing or using such information outside the course.

Electronically-hosted Components: Class materials, homework assignments, forum discussions.

L. Accommodations for Disabilities

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, student must register with the Disability Services Office (<http://www.ncsu.edu/dso>), 919-515-7653. For more information on NC State's policy on working with students with disabilities, please see the Academic Accommodations for Students with Disabilities Regulation at <http://policies.ncsu.edu/regulation/reg-02-20-01>.

M. Non-Discrimination Policy

NC State University provides equality of opportunity in education and employment for all students and employees. Accordingly, NC State affirms its commitment to maintain a work environment for all employees and an academic environment for all students that is free from all forms of discrimination. Discrimination based on race, color, religion, creed, sex, national origin, age, disability, veteran status, or sexual orientation is a violation of state and federal law and/or NC State University policy and will not be tolerated. Harassment of any person (either in the form of quid pro quo or creation of a hostile environment) based on race, color, religion, creed, sex, national origin, age, disability, veteran status, or sexual orientation also is a violation of state and federal law and/or NC State University policy and will not be tolerated. Retaliation against any person who complains about discrimination is also prohibited. NC State's policies and regulations covering discrimination, harassment, and retaliation may be accessed at <http://policies.ncsu.edu/policy/pol-04-25-05> or http://www.ncsu.edu/equal_op/. Any person who feels that he or she has been the subject of prohibited discrimination, harassment, or retaliation should contact the Office for Equal Opportunity (OEO) at 919-515-3148.

N. Course Evaluations

Online class evaluations will be available for students to complete during the last 2 weeks of the semester for full semester courses and the last week of shorter sessions. Evaluations then become unavailable at 8am on the first day of finals.

Full semester evaluations will be available:

8am November 18th, 2016 through 8am December 5th, 2016

Students will receive an email message directing them to a website where they can login using their Unity ID and complete evaluations. All evaluations are confidential; instructors will not know how any one student responded to any question, and students will not know the ratings for any instructors.