

## MA 151 Course Syllabus

### MA 151 - Calculus for Elementary Education I

**Section 001**

**Spring 2019**

**3 Credit Hours**

#### Course Description

Calculus for Elementary Education I is the first semester of a two semester sequence of courses designed for the Elementary Education Program. Topics will include sequences, limit, and derivative. Also, topics related to teaching elementary mathematics will be discussed. Students cannot receive credit for more than one of MA 151, MA 121, MA 131, or MA 141. MA 151 is not an accepted prerequisite for MA 231 and MA 241. This course is restricted to Elementary Education majors only.

#### Learning Outcomes

1. Participate in learning tasks that focus on different approaches to introduce and work with concept of calculus.
2. Actively learn mathematics that is based in calculus, but also supports elementary mathematics.
3. Use technology when appropriate to further their own understanding and prepare for using technology when they become a teacher.
4. Understand rate of change, function, differentiation, and integrations, from both a conceptual and computational perspective.
5. Enhance their problem solving skills and work on interpreting the mathematics in a real context.

#### Course Structure

The class will consist of short lectures on various topics, but a majority of class time will be dedicated to problem solving in small groups.

#### Instructors

**Blain Patterson** (bapatte3) - *Instructor*

**Email:** [bapatte3@ncsu.edu](mailto:bapatte3@ncsu.edu)

**Web Page:** [blainpatterson.weebly.com](http://blainpatterson.weebly.com)

**Phone:** 8148730113

**Office Location:** Poe 502 A

**Office Hours:** Available upon request.

#### Course Meetings

None.

#### Course Materials

##### Textbooks

None.

##### Expenses

None.

##### Materials

None.

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## Requisites 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.

### Co-requisites

None.

### Restrictions

Elementary Education majors only.

## General Education Program (GEP) Information

### GEP Category

**This course does not fulfill a General Education Program category.**

### GEP Co-requisites

**This course does not fulfill a General Education Program co-requisite.**

## Transportation

This course will not require students to provide their own transportation. Non-scheduled class time for field trips or out-of-class activities is NOT required for this class.

## Safety & Risk Assumptions

None.

## Grading

### Grade Components

Component	Weight	Details
Midterms	40	Two midterms will be given throughout the semester. They will be closed book and closed notes. No makeup exams will be given.
Homework	30	Homework will be assigned weekly. Although you make work on the homework assignments together, all students must turn in their own copy of each assignment.
Participation	5	Students are expected to attend every class and actively engage in small group and whole class discussions.
Final Exam	25	The final exam is cumulative.

### Letter Grades

**This Course uses Standard NCSU Letter Grading Scale**

97	≤	A+	≤	100
93	≤	A	<	97
90	≤	A-	<	93
87	≤	B+	<	90
83	≤	B	<	87
80	≤	B-	<	83
77	≤	C+	<	80
73	≤	C	<	77

70	≤	C-	<	73
67	≤	D	<	70
63	≤	D	<	67
60	≤	D-	<	63
0	≤	F	<	60

### 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>.

### Requirements for Auditors (AU)

Information about and requirements for auditing a course can be found at <http://policies.ncsu.edu/regulation/reg-02-20-04>.

### 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

Unexcused late assignments will result in an automatic 10% deduction of the grade on the assignment on the first day late. After the first day, an additional 5% will be deducted for each day the assignment is not turned in.

### Attendance Policy

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

### 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.

### Absences Policy

Excuses for anticipated absences must be cleared with the instructor before the absence. 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. 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.

### Makeup Work Policy

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. All anticipated absences must be excused in advance of the test date. 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. If the assignment is unexcused, see the late assignments policy. After three unexcused late assignments, late work will no longer be accepted.

#### **Additional Excuses Policy**

None.

#### **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>

None.

##### **Academic Honesty**

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

None.

##### **Honor Pledge**

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

#### **Electronically-Hosted Course Components**

There are no electronically-hosted components for this course.

#### **Accommodations for Disabilities**

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with the Disability Services Office at Suite 2221, Student Health Center, Campus Box 7509, 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 (REG02.20.01) (<https://policies.ncsu.edu/regulation/reg-02-20-01/>).

#### **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/](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.

#### **Course Schedule**

**NOTE:** The course schedule is subject to change.

#### **Calculus for Elementary Education I — 01/07/2019 - 04/26/2019**

Numeration Systems

Sequences and Limits

Function

Rate of Change and Derivative