

Syllabus for Beginning College Mathematics (MATH E111)

Fall 2012 (Aug 23 – Dec 11), Section 301

Department of Mathematics

University of South Carolina - Columbia

<i>Instructor</i>	Danny Rorabaugh
<i>Office</i>	LeConte 123B
<i>Office Hours</i> <i>(also by appointment)</i>	Tues 15:00 – 16:00 Thur 10:30 – 11:30
<i>LC 105</i>	Tues/Thur 14:00 – 15:00
<i>Email Address</i>	rorabaug@email.sc.edu

Class Where'n'When

<i>Room</i>	<i>Days</i>	<i>Time</i>
LeConte (LC) 115	Tues/Thur	17:00 – 18:15 (5:00 – 6:15 pm)

Prerequisites

Qualification through placement score of MB2 earned on the Algebra Placement Test.

Learning Outcomes

Upon successful completion of this course, students should be able to:

- Recall basic mathematical terms related to linear, quadratic, exponential, and logarithmic functions and express these terms in correct context.
- Apply the methods of algebra to solve applications involving intercepts, rates of change, inequalities, systems of equations, and interest growth.
- Verbally interpret relationships in data given as graphs, tables, and equations and express functions given in verbal context as a graph, table, or equation.

Course Materials

Your textbook package for this class is available in the bookstore for \$209.30. It includes the textbook listed below and an access code for WebAssign - <https://www.webassign.net/> - the online system we will be using for homework. To register for our class, the Class Key is: **sc 4817 1052**. Access to WebAssign is **required** for this course. However, since the online system comes with an eBook of our textbook, the textbook itself is *optional*. If you choose not to purchase the textbook from the bookstore, then you can purchase your access code online for when you enroll (\$70 with eBook).

Textbook: *College Algebra: Concepts and Context*
Stewart, Redlin, Watson, Panman
ISBN: 9780495387893

Various handouts and other class-related materials will also be posted on Blackboard - <https://blackboard.sc.edu>. In addition, all emails regarding the class will be sent through Blackboard. Please ensure that the email tied to your account is one you check regularly.

A calculator (scientific or graphing) is **required** for this course, and should be brought to class every day. For many parts of this course, a graphing calculator is *recommended*, however, CAS/symbolic calculators (e.g., TI-89 and TI-92) will not be permitted on any quizzes or tests.

Grading

Your grade will be based on attendance, online assignments, regular quizzes, four midterm exams, and one final exam. The weight designated for each is as follows:

Attendance	5%
Assignments	15%
Quizzes	20%
Exams	60%

Letter Grades

An 'A' in the class reflects superb mastery of the concepts; a 'B' reflects mastery; a 'C' demonstrates an average understanding of the material; a 'D' or 'F' shows a below average understanding of the material. Below is the quantitative breakdown of the aforementioned grades.

A	[90%, 100%]		
B	[80%, 85%)	B+	[85%, 90%)
C	[70%, 75%)	C+	[75%, 80%)
D	[60%, 65%)	D+	[65%, 70%)
F	[0%, 60%)		

Attendance

Even though attendance only counts toward 5% of your grade, it is necessary to regularly attend class in order to stay on top of the material. By standard policy, students missing more than 10% of the class meetings can have their overall grade lowered. After the third absence, each absence will result in a loss of 0.5 of the 5.0 percentage points allocated to attendance. **When roll is not taken, do not forget to initial the roll sheet at the end of each class session.** Leaving class early counts as an absence. Your three penalty-free absences should be saved for the unforeseen emergencies of life; I will not accept doctors' notes or other excuses aside from extenuating, long-term situations.

Assignments

Assignments make up 15% of your grade. Almost all assignments will be completed online in WebAssign. In most cases, you will be provided with multiple attempts and problem solving resources on the problems. However, keep in mind that these resources will not be available on quizzes and tests. It is your responsibility to work through the homework problems in their entirety in order to gain mastery of the material. Students are encouraged to work together on homework, but each student must personally submit his or her own solutions in WebAssign.

Quizzes

Quizzes make up 20% of your grade. There will be at least one quiz per week, usually at the beginning of class. The quizzes are intended to test you on material that has been covered in class and on homework, and to prepare you for the sorts of questions that will be on your exams. I will drop each student's lowest quiz grade at the end of the course. There will be no make-up quizzes.

Exams

Exams make up 60% of your grade. By university policy, students must attend the final exam to pass the course. The last day to drop the course without an WF on your transcript is Thursday, October 11 (our last class day before Midterm 2).

Midterm 1	Tues 9/18 or Thur 9/20 (t.b.d.)
Midterm 2	Tues 10/16 (last class before Fall Break)
Midterm 3	Tues 11/20 (last class before Thanksgiving)
Final Exam	Tues 12/11, 4:00 – 6:30 pm

Electronics in Class

No electronics are to be used in class. This includes laptops, cell phones, and mp3 players. Calculators, watches, pacemakers, hearing aids, etc. are obvious exceptions to this rule.

Additional Help

If you're having any trouble in the course, please visit me during my office hours (see top of syllabus).

Additionally, free help is available at the Math Tutoring Center in LeConte 105

(<http://www.math.sc.edu/mathlab.html>), or you can hire somebody for private tutoring

(<http://www.math.sc.edu/mathlab/private/>). More student resources are available at the Academic Centers for Excellence (<http://www.housing.sc.edu/ace/>).

Academic Honesty

Cheating and plagiarism will not be tolerated. You may discuss all assignments with others, but the work you submit must be your own. Exams are always independent tasks. Violations of this policy will be dealt with according to University guidelines. You can find a link to the University Honor Code at <http://www.sc.edu/academicintegrity/>. The following are examples - not a comprehensive list - of actions considered as academic dishonesty:

- Turning in work copied (whole or in part) from another student or resource (print or electronic) as your own.
- Communicating with other persons or using unauthorized resources during tests and quizzes.

Course Topics

<i>Textbook Section(s)</i>	<i>Topic</i>
A.2	The Number Line and Intervals
A.3 – A.4	Exponents
B.1 – B.3	Algebraic and Rational Expressions
C.1 – C.3	Solving Equations and Inequalities
1.3	Equations: Describing Relationships in Data
1.4	Fun(ctions): Describing Change
1.5	Fun. Notation: The Concept of Fun. as a Rule
1.6 – 1.7	Working with Fun.: Graphs
1.8	WwF: Modeling Real-World Relationships
2.1	WwF: Averaging Rates of Change
2.2	Linear Fun.: Constant Rate of Change
2.3	Equations of Lines: Making Linear Models
2.4	Varying the Coefficients: Direct Proportionality
2.6 – 2.7	Linear Equations
3.1	Exponential Growth and Decay
3.2	Exponential Models: Comparing Rates
3.4	Graphs of Exponential Fun.
4.1	Logarithmic Fun.
4.2	Law of Logarithms
4.4	The Natural Exponential and Logarithm Fun.
4.5	Exponential Equations: Getting Info. from a Model
4.6	WwF: Composition and Inverse
5.1	WwF: Shifting and Stretching
5.2	Quadratic Fun. And Their Graphs
5.3	Maxima and Minima
5.4	Quadratic Fun.: Getting Info. from a Model
6.2	Power Fun.: Positive Powers