

Syllabus for Math 111, Sections 009/Q09 Fall 2022

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Course Description

MATH 111 - Basic College Mathematics

Credits: 3

Basic college algebra; linear and quadratic equations, inequalities, functions and graphs of functions, exponential and logarithm functions, systems of equations. Credit may not be received for both MATH 111 and 115.

Prerequisites: Qualification through the Math Assessment of Prerequisites (MAP) test score of 4 or higher:

https://sc.edu/study/colleges_schools/artsandsciences/mathematics/study/math_placement/index.php

Text: Stewart, Redlin, and Watson, *College Algebra*, 7th Edition, 2016. ISBN: 978-1-305-11554-5 (eBook strongly recommended)

Online Homework System: WebAssign (<http://www.webassign.net>) (Optional)

Sections: Sections P.1-P.9, 1.1, 1.3-1.4, 1.6-1.7, 1.10, 2.1-2.8, 3.1-3.2, 4.1-4.6, 5.1

Class Meetings: This is an in-person class. We will meet in person Tuesdays and Thursdays. If you are unable to attend class because of quarantine or isolation, you may attend remotely via Microsoft Teams. (If you are well, you are expected to attend in person.)

Schedule:

Class Meetings — TTh in CLHipp 335

Online — Microsoft Teams: Team Code **x1msz0x**

Online: Class meetings will be streamed on MS Teams (<http://teams.microsoft.com>). Students are expected to attend class in person when they are well. Remote learning is available for emergency situations but should NOT be considered an alternate option for regularly attending class. **Students are strongly encouraged to maintain a notebook for the course.** You should take notes on important definitions, keep an organized copy of example problems, etc. Class handouts, worksheets, solutions, and printable fill-in notes will be posted on Blackboard (<http://blackboard.sc.edu>) under the Course Documents tab. Completed notes can be found in the Class Notebook in MS Teams or OneNote (<http://onenote.com>) in the Content Library. **Note:** Class lectures will not be recorded.

Attendance and Participation: Regular attendance and participation is expected. In accordance with University policy, a letter grade may be deducted for each 10% of classes missed (unexcused). **Withdrawal:** Any student wishing to withdraw from the class should do so by Wednesday, November 2. Students dropping after this date will receive a WF for the course.

Cell Phones/Laptops/Smart Watches: In accordance with CAS policy, I will ask that all cell phones be turned off (or at the very least be put on vibrate) during class. Also, please refrain from texting during class – it is disrespectful and distracting. **Your cell phone should not be out at any time during a test or quiz.** The use of any laptop during class is discouraged. Smart watches should not be worn on test or quiz days.

Calculators: Calculators may be used on tests and quizzes unless otherwise noted. Students will need a scientific calculator that can evaluate exponentials and logarithms. (The TI-83/84 will be highly recommended for Math 122.) Use of the TI-89, TI-Nspire, or other calculator with a built-in CAS (computer algebra system) is prohibited.

Note: You may NOT store notes or formulas of any kind on your calculator. You will be asked to clear the memory on your calculator before each test. Also, you may not share calculators during a test or quiz.

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

- Factor various polynomial expressions using the methods: finding a common factor; using special formulas, including difference of squares and sum or difference of cubes; factoring a quadratic whose leading coefficient is 1; factoring a quadratic whose leading coefficient is not 1; and factor by grouping.
- Solve polynomial equations using factoring and solve quadratic equations using factoring, completing the square, and the quadratic formula.
- Work effectively with rational expressions including simplification of sums, differences, products, and quotients and solving equations involving rational expressions.
- Use order of operations, properties of exponents, function notation, properties of logarithms
- Find and interpret the average rate of change of a function using an equation, a table of values, or an equation.
- Write the equation of a linear or exponential function using two points, a table of values, or a general description of the function. Write equations of vertical, horizontal, parallel, and perpendicular lines.
- Distinguish between the growth or decay of linear and exponential functions. Solve real-world applications involving linear and exponential functions.
- Differentiate between interest compounded annually, interest compounded continuously, and other types of compound interest. Convert from one form to the other and understand the difference between the nominal and effective rates.

(For a detailed list of course objectives, look at the Tentative Course Schedule on Blackboard.)

Tests: There will be three tests and cumulative final exam. The *tentative* dates for these are:

- Test 1: Thursday, September 15 on Sections P.1-P.9, 1.1, 1.3
- Test 2: Tuesday, October 25 on Sections 1.4, 1.6-1.7, 1.10, 2.1-2.6
- Test 3: Tuesday, November 22 on Sections 2.7-2.8, 3.1-3.2, 4.1-4.6, 5.1
- Final: Tuesday, December 6 @ 4pm in CLHipp 335

Note: November 22 is the Tuesday before Thanksgiving. Please do not make travel plans for this day.

Make-up exams will be available in the event of documented illness/family emergency. Those with acceptable excuses must contact me within 24 hours of the scheduled exam time to schedule a make-up. **Tests given in class must be made up in person.**

- **Test Description:** All three tests and the final exam will be a combination of short answer questions and applications where you will work out math problems. You will be graded based on a completely correct solution – not just the final answer. All steps must be correct for full credit.

Suggested Homework: Suggested homework problems will be recommended at the end of each section. Solutions to these suggested problems will be posted on Blackboard. Practice homework using WebAssign (<http://www.webassign.net>) will also be available for those students who prefer the instant feedback of an online homework system. Students are encouraged to complete (or at the very least attempt) the suggested problems.

- **Textbook Suggested Homework Description:** Suggested problems from the textbook are recommended at the end of every section. Complete solutions to this homework are posted on Blackboard.
- **WebAssign Practice Homework Description:** Practice homework using WebAssign is posted at the end of every section. If you miss a question on the Practice Homework, you will be able to view the solution and access further resources to help you understand the correct solution. You can try the problem as many times as you wish and the due date will always be the date of the test on which this material appears.

Worksheets: Graded worksheets will be assigned once a week and posted on Blackboard under Course Documents. It is the student's responsibility to print the worksheet, complete it, and properly upload it to their personal Worksheets folder in the Class Notebook in OneNote/Teams before the due date. Worksheets are due by 5pm on the due date. Solutions will be posted on Blackboard around 5:30pm. **Once solutions have been posted, late worksheets will not be accepted for any reason.**

- **Worksheet Description:** A typical worksheet is 2-3 pages. Questions are a combination of short answer questions and applications where you will work out math problems. You will be graded based on a completely correct solution - not just the final answer. All steps must be correct for full credit.
- **Worksheet Collaboration:** You are welcome (and encouraged!) to work together on the worksheets and seek out help from tutors, SI, and your instructor, however, you should NEVER copy another person's work or share your completed worksheet via email, Zoom, GroupMe, etc. If you are helping a fellow student,

you should look at their work and try to help them find their errors. **The sharing of completed solutions is not working together – you are not helping!** Students who are working too closely with one another will be reminded, warned, and then reported to Academic Integrity.

- **Worksheet Submission:** Your worksheet must be submitted on the **Instructor-created worksheet submission page** in the student's worksheets folder in the COTEAM-RSANDERS-MATH-111-009-FALL-2022 Class Notebook. If you cannot find this submission page or accidentally delete it, please contact the instructor. This page will be locked and read-only once solutions have been posted. If you cannot correctly submit the worksheet, you may email it to sanders@math.sc.edu before the due date. If you want to verify that you have correctly submitted your worksheet, log into <http://onenote.com> from a desktop computer and see if you can see it there. If you cannot, please sync your notebook and try again.
- **Worksheet Grading:** Worksheets will be graded in OneNote and students will be able to see their scores by viewing the worksheet again in their personal folder once grading is complete. If you find a page that says "Not Submitted" instead, please contact the instructor – this usually happens when your notebook is not properly synced at the time of submission. Worksheets will typically be graded by Sunday. You should review your score and any grading notes before the quiz on Tuesday.

In-Class Quizzes: Quizzes will be given weekly during class and will be based on the homework. **The lowest 2 quiz or worksheet scores will be dropped regardless of excuse.** Make-up quizzes will only be available for students on the third missed assignment. Any student requesting a make-up must have a **documented excuse** and take the make-up as soon as possible. **Quizzes given in class must be made up in person.**

- **In-Class Quiz Description:** Quizzes will be given once a week during class and will be based on the most recent worksheet. Quizzes will be 3-5 problems and should take between 10-15 minutes at the end of class. Questions will be a combination of short answer questions and applications where you will work out math problems. You will be graded based on a completely correct solution – not just the final answer. All steps must be correct for full credit.

Typical Weekly Schedule: A typical week will look like this:

- **Thursday** Current worksheet due by 5pm.
 Solutions posted under Course Documents on Blackboard by 5:30pm.
 New worksheet posted under Course Documents on Blackboard.
- **Tuesday** In-class quiz

Grading:

Quizzes/Worksheets:	100 pts (~18%)
3 Tests:	100 pts each (~18% each)
Final Exam:	150 pts (~27%)

Total:	<hr/> 550 pts
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Letter grades will be given according to the following scale:

A :	90-100%
B+:	85-89%
B :	80-84%
C+:	75-79%
C :	70-74%
D+:	65-69%
D :	60-64%
F :	below 60%

Supplemental Instruction: SI sessions are led by an undergraduate student who has taken this course and excelled in the course material. Your SI leader will facilitate a discussion and activities that encourage you to practice, discuss, and ask questions about the most current course material. Each SI leader holds three sessions per week. You can find the SI schedule online at <https://sites.google.com/site/uscsupplementalinstruction/>. You can also contact the Student Success Center at (803)777-0684 if you have questions about the SI schedule.

Additional Help: For (free!) additional assistance, visit the math lab. Due to the ongoing issues with LeConte, I am unsure of the current plan for the tutoring center. For more information about availability of tutors check the website https://sc.edu/study/colleges_schools/artsandsciences/mathematics/study/tutoring/. Tutoring in the math lab is open to all students enrolled in a 100-level MATH class. You do not need an appointment – you can drop in whenever the lab is open. In addition, look for peer tutoring resources, including online tutoring, at the Student Success Center <http://www.sc.edu/success/>. Finally, you are always welcome to come ask me questions. My office is currently Honors Residence Hall A107 (on the 1st floor) and will be LeConte 433 (on the 4th floor) when the building is open. If you cannot make it during office hours, just send me an email to request an appointment. The university offers many options for help. Do not wait until you are completely lost to seek assistance!

Minimum Technical Skills and Technology Requirements

Minimal technical skills are needed in this course. All graded worksheets must be completed and submitted online via OneNote/Teams. It is recommended that students download the OneNote app to their phones – submitting an assignment is as easy as taking a picture. In addition, class meetings are streamed via MS Teams. Therefore, students **must** have consistent and reliable access to a computer and the Internet.

The minimal technical skills students should have include the ability to:

- organize and save electronic files,
- use email and attached files,
- check email and Blackboard daily,
- create a pdf from a paper assignment using Office Lens or a similar app, and
- submit assignments via OneNote/Teams.

If you have problems with your computer, please contact University Technology Support (UTS) Help Desk at 803.777.1800 or helpdesk@sc.edu. The UTS Help Desk is open Monday – Friday from 8:00 AM – 6:00 PM.

Academic Integrity

All students must review the Office of Academic Integrity sanctions. This information may be found at https://www.sc.edu/about/offices_and_divisions/student_conduct_and_academic_integrity/index.php

One or more of the following sanctions may be imposed for Academic Integrity violations: 1) Expulsion from the University; 2) Suspension from the University for a period of no less than one semester; and/or Probation. A combination of the above sanctions may be implemented. It should be noted that submitting someone else's work is cheating and against the Carolina Code. Cheating, or any other Academic Integrity violations, will result in failure of the course for all involved parties. All parties will also be referred to the Office of Academic Integrity for additional retribution.

Copyright – As an instructor, I will provide citations and acknowledgement of any instructional materials that I use in this course that I do not create myself. All materials in this course are copyrighted and you as a student may not distribute them in any format outside of this course. This includes all materials provided either electronically or as class handouts.

Student Disability Services

Students with disabilities should contact the Office of Student Disability Services. Students with special test accommodations should request that tests be proctored by SDS at least a week before the test date. The contact information is below:

MAIN OFFICE, 1705 College Street, Close-Hipp, Suite 102, Columbia, SC 29208

Phone: 803-777-6142 Email: sadrc@mailbox.sc.edu Web: <http://www.sa.sc.edu/sds/>

These services provide assistance with accessibility and other issues to help those with disabilities be more successful. Additionally, students with should review the information on the Disabilities Services website and communicate with the professor during the first week of class. Other academic support resources may help students be more successful in the course as well.

- Library Services (http://www.sc.edu/study/libraries_and_collections)
- Writing Center (<http://www.cas.sc.edu/write>)
- Student Technology Resources (<http://www.sc.edu/technology/techstudents.html>)

Tentative Course Schedule

Week	Sections	Topics
0	P.1	Modeling the Real World with Algebra and Real Numbers
1	P.2-P.5	Integer Exponents and Scientific Notation, Rational Exponents and Radicals and Algebraic Expressions
2	P.6-P.7	Factoring, Rational Expressions
3	P.8-P.9	Solving Basic Equations, Modeling with Equations
4	1.1, 1.3	The Coordinate Plane, Lines
5	1.4, 1.6	Solving Quadratic Equations, Solving Other Types of Equations
6	1.7, 1.10	Solving Inequalities, Modeling Variation
7	2.1-2.2	Functions, Graphs of Functions
8	2.3-2.4	Getting Information from the Graph of a Function, Average Rate of Change of a Function
9	2.5-2.6	Linear Functions and Models, Transformations of Functions
10	2.7-2.8, 3.1	Combining Functions, One-to-One Functions and Their Inverses, Quadratic Functions and Models
11	3.2, 4.1-4.3	Polynomial Functions and Their Graphs, Exponential Functions and The Natural Exponential Function, Logarithmic Functions
12	4.4-4.6	Laws of Logarithms, Exponential and Logarithmic Equations, Modeling with Exponential Functions
13	5.1	Systems of Linear Equations in Two Variables
14		Review for the Final Exam

Tentative Schedule of Assignments

Day	Date	Assignment/Holiday	Day	Date	Assignment/Holiday
Th	Aug 18	Worksheet 1 Posted	T	Oct 18	Worksheet 6 Due by 5pm Worksheet 6 Solutions Posted Pretest 2 Posted
Th	Aug 25	Worksheet 1 Due by 5pm Worksheet 1 Solutions Posted Worksheet 2 Posted	Th	Oct 20	Quiz 6
T	Aug 30	Quiz 1	T	Oct 25	Test 2
Th	Sept 1	Worksheet 2 Due by 5pm Worksheet 2 Solutions Posted Worksheet 3 Posted	Th	Oct 27	Worksheet 7 Posted
T	Sept 6	Quiz 2	Th	Nov 3	Worksheet 7 Due by 5pm Worksheet 7 Solutions Posted Worksheet 8 Posted
Th	Sept 8	Worksheet 3 Due by 5pm Worksheet 3 Solutions Posted Pretest 1 Posted	T	Nov 8	Election Day – No Classes
T	Sept 13	Quiz 3	Th	Nov 10	Quiz 7 Worksheet 8 Due by 5pm Worksheet 8 Solutions Posted Worksheet 9 Posted
Th	Sept 15	Test 1	T	Nov 15	Quiz 8 Pretest 3 Posted
Th	Sept 22	Worksheet 4 Posted	Th	Nov 17	Worksheet 9 Due by 5pm Worksheet 9 Solutions Posted
Th	Sept 29	Worksheet 4 Due by 5pm Worksheet 4 Solutions Posted Worksheet 5 Posted	T	Nov 22	Test 3
T	Oct 4	Quiz 4	Th-F	Oct 13-14	Fall Break – No Classes
Th	Oct 6	Worksheet 5 Due by 5pm Worksheet 5 Solutions Posted Worksheet 6 Posted	W-F	Nov 23-25	Thanksgiving Break
T	Oct 11	Quiz 5			

