Syllabus for Math 111, Section 011
Fall 2024

Instructor: Chase Fleming
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Office Hours: TBD

Course Description
MATH 111i - Intensive Basic College Mathematics
Credits: 4
Basic college algebra; linear and quadratic equations, inequalities, functions and graphs of functions, exponential and logarithmic functions, systems of equations.
Prerequisites: Qualification through the Math Assessment of Prerequisites (MAP) test:
https://sc.edu/study/colleges_schools/artsandsciences/mathematics/study/math_placement/index.php

Class Meetings: This is an in-person class. We will meet in person on Monday, Tuesday, Wednesday, and Thursday.

Schedule: MW DMSB Room 109, 5:30-6:45PM
TTh Close-Hipp Room 201 6:00-6:50PM

Online Materials: Class handouts will be available on Blackboard (http://blackboard.sc.edu) after class. Homework will be completed online through WileyPlus (http://education.wiley.com). Students who are not registered on WileyPlus when an assignment is due will receive a zero on those assignments.

Text: McCallum, Connally, Hughes-Hallett, et al., *Algebra: Form and Function*, 2nd Edition, 2015. ISBN: 978-1-119-04727-8 (eBook strongly recommended)
Online Homework System: WileyPlus (http://education.wiley.com) (Required)
Sections: Sections 1.1-1.5, 2.1-2.6, D.1, 3.1-3.5, C.1, 5.1-5.4, 6.1-6.3, 6.5-6.6, 7.1-7.4
Students are required to purchase WileyPlus access. This access will include access to the eText. **Students do not need a hard copy of the text.**

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). Moreover, attendance will count towards your final grade.

Withdrawal: Any student wishing to withdraw from the class should do so by Wednesday, November 6. 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 for anything other than class participation is prohibited. Smart watches should not be worn on test or quiz days.

Learning Outcomes: Upon successful completion of this course, students should be able to:
- Work effectively with functions and function notation. Identify independent and dependent variables and interpret their meaning in the real-world. Create expressions to model real-world applications. Distinguish between an expression and an equation. Create and solve linear equations. Solve proportions.
- 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. Compare annual and continuous growth and decay. Use logarithms to solve exponential equations.
- Solve a system of linear equations using substitution, elimination, or graphing. Create and apply systems of equations to real-world applications.
- 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. Recognize and identify characteristics of a quadratic function in standard form, vertex form, or factored form.
- Solve linear and nonlinear inequalities.
- Determine the domain and range of a given function. Evaluate and apply compositions of functions.
- Graph functions using vertical and horizontal translations and reflections.
- Find and verify the inverse of a one-to-one function.

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

- Exam 1: Monday, September 23 on Sections 1.1-1.5, 2.1-2.6
- Exam 2: Monday, October 28 on Sections D.1, 3.1-3.5, C.1, 5.1-5.4
- Exam 3: Thursday, November 21 on Sections 6.1-6.3, 6.5-6.6, 7.1-7.4
- Final Exam: TBD

Note: Friday, November 22 is the Friday before Thanksgiving Break. Travel plans that have not been finalized before the first day of class will not be considered with regard to this test on Nov. 21. Make-up exams will be available in the event of a 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.**

Testing: All tests will be administered during the face-to-face class session.

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.

WileyPlus Homework: Graded Assignments will be given once a week and graded via WileyPlus. Students must complete each assignment online before the due date. The lowest graded assignment grade will be dropped regardless of excuse. If you have a legitimate excuse for missing more than one graded assignment, please come talk to me.

WileyPlus Graded Assignment Description: Graded assignments will be posted once a week and graded via WileyPlus. If you miss a question on a Graded Assignment, you will have 2 more chances to get the question correct, but you will not be able to view tutorials or hints. Graded assignments are usually due on Monday before midnight. You will be able to access the key to these solutions after the due date, and you should review the problems you missed before the quiz on Thursday.

In-Class Quizzes: Quizzes will be given weekly during the face-to-face class session and will be based on the homework. The lowest quiz grade will be dropped regardless of excuse. Make-up quizzes will only be available for excused absences. 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 the face-to-face class session and will be based on the most recent WileyPlus Graded Assignment. Quizzes will be 3-5 problems and should take between 20-25 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:

- **M** New homework posted.
  Previous homework due by midnight.
- **M/T/W** Lecture and examples.
- **Th** Finish Lecture/Quiz Review and Quiz.

Calculators: A scientific or graphing calculator is required for the course. (Students should be able to evaluate exponential and logarithmic functions.) Use of the TI-83/84 is strongly recommended. Use of the TI-89, TI-Nspire, or other calculator with a built-in CAS (computer algebra system) is prohibited. **You may NOT use your cellphone as a calculator. 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.

Grading: Your final grade will be determined by a weighted average given the following categories

Quizzes:	15%
WebAssign Graded Assignments:	10%
Attendance:	10%
3 Exams:	45% (15% each)
Final Exam:	20%

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%

Additional Help: For (free!) additional assistance, visit the math lab. Tutors there will be able to answer most questions. The Math Tutoring Center is located in LeConte 102. 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. Drop-In Tutoring is also available in the evening in many campus locations. 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 TBD. 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! **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.

Minimum Technical Skills and Technology Requirements
Minimal technical skills are needed in this course. All graded homework assignments in this course must be completed and submitted online via WileyPlus. In addition, course handouts and examples are posted on Blackboard. Therefore, students **must** have consistent and reliable access to a computer and the Internet. Before starting this course, students must feel comfortable doing the following.

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,
- register for and submit assignments via WileyPlus,
- use online mathematics tools such as Desmos (https://www.desmos.com/).

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. If you have problems with WileyPlus, please visit the Student Support section of WileyPlus.

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. The contact information is below:

MAIN OFFICE: 1705 College Street, Close-Hipp, Suite 102, Columbia, SC 29208
Phone: 803-777-6142 Fax: 803-777-6741 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 accommodations should review the information on the Disabilities Services website and communicate with the professor during the first week of class.

Tentative Course Schedule

Week	Sections	Topics
1	1.1-1.2	Functions and Expressions
2	1.3-1.5	Functions and Equations, Change, Modeling and Proportions
3	2.1-2.2	Linear Functions and Linear Expressions
4	2.3-2.5	Linear Equations, Equations for Lines in the Plane, Modeling with Linear Functions
5	2.6	Systems of Linear Equations, Review
6	D.1, 3.1-3.2	Factoring, Quadratic Expressions
7	3.3-3.4	Converting Quadratic Expressions to Factored and Vertex Form, Solving Quadratic Equations
8	3.5, C.1, 5.1	Solving Hidden Quadratics, Solving Inequalities, Domain and Range
9	5.2-5.3	Composing and Decomposing Functions, Shifting
10	5.4	Inverse Functions, Review
11	6.1-6.3	Exponential Functions, Half-Life and Doubling Time
12	6.5-6.6, 7.1	Modeling with Exponential Functions, Exponential Functions and Base e, Introduction to Logarithms
13	7.2-7.3	Solving Exponential Equations Using Logarithms, Applications of Logarithms to Modeling
14	7.4	Natural Logarithms and Other Bases, Review
15		Review for the Final Exam