MATH 7282, Section 1 — Fall, 2018

M 4:30 - 6:30 p.m., Dunn Hall 109

Instructor: Dr. Ben McCarty

Office: DH 345
Email: bmmccrt1@memphis.edu
Office hours: 2:30 - 3:30 M Th (or appointment)

Prerequisites: Permission of Instructor.

Goals: This course focuses on the content knowledge needed to teach high school or college algebra. In particular we will explore the pedagogical content knowledge pertaining to various types of functions including linear, polynomial, rational, radical, exponential and logarithmic.

Texts: *College Algebra 5th Edition*, by Beecher, Bittinger, and Penna, with MyMathLab access. My suggestion will be to buy the MyMathLab access, which comes with an etext. You will need the course ID *mccarty31634*.

Expectations: As you know, our course consists of 2 hours in class, and 1 hour of online instruction. My goal with the in class instruction is to get y'all involved each week, solving problems, and discussing solutions/ideas. Mathematics is largely learned by doing. With that in mind, classes will proceed with me introducing concepts/ideas, and you working problems individually and/or in groups. My goal is for you, the students, to solve most of the problems, produce examples, and take ownership of this material. You will be expected to present solutions to your peers, and critique the solutions presented by your peers. Part of the goal here is to practice teaching, to anticipate points of student confusion, and to improve our teaching.

We will loosely follow the textbook's presentation of the material, but we will frequently deviate and add to as I feel it's appropriate. This means that you will need to take complete notes, and that attendance is important. Your notes should include any definitions, theorems and examples presented in class, as well as example problems worked out and presented by you or your fellow classmates along the way.

Some homework will be assigned in MyMathLab each week. This will serve as a review of the types of problems students are expected to solve, as well as familiarize you with the software your students may be expected to use. In addition to the MyMathLab homework, some additional content will be assigned through eCourseware. Each week I will post a few questions for you to solve and discuss online. For example, you may be asked to study the textbook's presentation of a particular topic and answer questions, explain a concept, present a teacher solution to a problem, or create a teaching sequence. In many cases, you will be required to post your own solution, and to provide feedback on the solutions of your peers. In all cases discussion is encouraged. Many times these problems will serve as opening discussion for the next class-meeting. You should come to class prepared to discuss and critique your solutions.

Grading Policy: Grades will be based on your in-class and online presentations and participation, graded homework, and 2 take-home exams. The homework will consist of both MyMathLab grades, and your solutions/critiques for problems posted on eCourseware.

Grade Breakdown:

40 %	2 Exams
50 %	Homework
10 %	Class Presentations

The grading scale (rounded to the nearest whole number) is straightforward:

$90\% - 100\%$	:	A	$80\% - 89\%$	:	B
$70\% - 79\%$	:	C	$60\% - 69\%$	:	D
$0\% - 59\%$	:	F			

Other Miscellany: I will send out email emails from time to time with announcements and/or supplemental materials. Be sure that you check your Memphis email regularly (or have it forwarded to your preferred email address) and to regularly check eCourseware and MyMathLab.

I have no objection to the use of calculators, where appropriate, and we will at times make use of them, along with other software. A TI-83 or better may be helpful, but is not required.

Important dates: For holidays/university closures, see
http://www.memphis.edu/registrar/calendars/academic/ay1819.php