

Course Syllabus: College Algebra

MATH 3A-51097

Instructor: Mr. Steven Zook

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Office Hours:

TW (Virtual) 9:00 – 10:00 am

and by appointment

Meeting Room: Web

Meeting Days: 6/24 – 8/2

Course Description: This is a college level course in algebra for majors in science, technology, engineering, and mathematics. Students will study polynomial, rational, radical, exponential, absolute value, and logarithmic functions; systems of equations; theory of polynomial equations; analytic geometry.

Course Prerequisites: MATH 103 or equivalent

Course Advisories: Eligibility for English 1A

Student Learning Outcomes:

Upon completion of this course, students will be able to:

1. Analyze properties of various types of functions.
2. Synthesize results from the graphs and/or equations of functions.
3. Solve various types of equations and inequalities.
4. Apply appropriate techniques to model real world applications.
5. Use formulas to find sums of finite and infinite series.

Objectives:

In the process of completing this course, students will:

1. Analyze and investigate properties of functions, including linear, polynomial, absolute value, rational, radical, exponential, and logarithmic functions;
2. Synthesize results from the graphs and/or equations of functions, including linear, polynomial, rational, radical, exponential, and logarithmic functions;
3. Apply transformations to the graphs of functions;
4. Recognize the relationship between functions and their inverses graphically and algebraically;
5. Solve and apply rational, linear, polynomial, radical, absolute value, exponential, and logarithmic equations and solve linear, nonlinear, and absolute value inequalities;
6. Solve systems of equations and inequalities;
7. Apply techniques for finding zeros of polynomials and roots of equations;
8. Apply functions and other algebraic techniques to model real world applications;
9. Analyze conics algebraically and graphically; and
10. Use formulas to find sums of finite and infinite series.

**Required Text: Margaret Lial, College Algebra, Pearson, 12th Edition, 2017.
ISBN: 97801343217451**

This text is required for reading; however, you do not have to purchase a hard copy of the text since it is available online as an eText with the required MyMathLab subscription.

Required Course Material: You will be required to obtain access to MyMathLab. To access the course, follow the instructions below:

Enter Your Canvas Course:

1. Sign in to Canvas and enter your Canvas course.
2. Do one of the following:
 - Select any Pearson link from any module.
 - Select the **MyLab & Mastering** link in the Course Navigation, and then select any course link on the Pearson page.

Get Access to Your Pearson Course Content:

1. Enter your Pearson account **username** and **password** to **Link Accounts**. You have an account if you have ever used a Pearson MyLab & Mastering product, such as MyMathLab, MyITLab, MySpanishLab, MasteringBiology or MasteringPhysics.
 - If you don't have a Pearson account, select **Create** and follow the instructions.
2. Select an access option:
 - Enter the access code that came with your textbook or was purchased separately from the bookstore.
 - Buy access using a credit card or PayPal account.
 - If available, get temporary access by selecting the link near the bottom of the page.
3. From the You're Done page, select **Go to My Courses**.

Note: We recommend you always enter your MyLab & Modified Mastering course through Canvas.

WARNING: Any students who do not gain full paid access to MyMathLab by Saturday 6/29/19 will be automatically dropped from the course.

Office Hours: I will be holding online office hours through Canvas by twice weekly. I will also be available by appointment. Please don't hesitate to take advantage of these since I want you to succeed – it's what I am here for! Through Canvas we have access to WorldWideWhiteboard. Of course, I am always available by email and messaging through Canvas.

Attendance: In a traditional face-to-face class you would be expected to attend every class meeting. In an online course, things work differently but the principle is the same. Each week you will be expected to respond to a set of questions in a discussion forum. This will act as a chance to demonstrate class participation and interact with the other

students in the class. A six week course requires a significant time commitment from the beginning until the end. Therefore, **ANY missed assignment during the first week will result in a drop from the course.** Additionally, **four (4) missed assignments (homework, discussion, quiz, or exam)** will result in a drop from the course. If you decide to drop, it is your responsibility to drop the class officially through the Administration and Records office. In failing to do so, you run the risk of receiving a **grade of F.**

Drop Deadline: Saturday, July 13

Assignments & Exams:

All **online homework** assignments will be completed online at **MyMathLab**. Homework assignments will be due on the due date by **11:59pm** and will cover topics outlined in the course calendar. If you submit your homework late, there is a **10% penalty for each day** that the assignment is late. An assignment that is late 10 days or more receives no credit (10 days \times 10%/day = 100% penalty).

There will be twice-weekly **quizzes** that will be completed in **MyMathLab**. These will be available on the date they need to be completed and you will be given a time limit in which to complete the quiz. These may not be made up if they are attempted late. If you know in advance that you need to take the quiz early, please let me know.

Throughout the course there will regularly be **discussion questions** (twice a week) covering material related to the topic for the week. Participation in the weekly discussions is a requirement for this course. I will post a variety of topics for discussion on the Canvas page and there are two types of required responses:

1. You are required to respond to an initial discussion question with a substantive response by midnight of the due date each week. (2 points)
2. You are required to respond to two (2) classmates' responses on at least two **different** days of the week. Multiple responses made on the same day will count as a single response. (each 1 point)

The above requirements will ensure that you participate on at least three (3) different days of each week. A response that is substantive is a response that provides all the needed steps to solve a given problem and uses complete English sentences where necessary. A response that is not appropriate, does not pertain to the topic, or is not substantive will receive no credit. There are a total of 40 available points for the discussion (4 points for each of the 10 discussions).

There will be a **project** this semester that will require work and intellectual investment beyond the minimum. The project will be aligned with the content we are working through in class at the time they are assigned. Details on these assignments will be available on Canvas. The project will be given **one week** before it is due. Use the full week to complete the project and no late projects will be accepted unless an extension is granted **in advance** on a case-by-case basis.

There will be **six chapter tests** completed through **MyMathLab** during the course and the dates they will be held are in the course calendar and they will cover the specified content. There will be no make-up exams allowed although it will be possible to schedule a time to take an exam early if it is prearranged.

The **comprehensive final exam** will be on **Friday, August 2**, and will be given through **Canvas**.

Assignment Categories and Weighting

<i>Assignment</i>	<i>Weighting</i>
Online Homework	15%
Quizzes (10 @ 1% each)	10%
Discussion Board (10 @ 2% each)	20%
Project	10%
Chapter Tests (6 @ 5% each)	30%
Final Exam	15%

Final Grades

<i>Letter Grade</i>	<i>Percent</i>
A	90-100
B	80-89
C	70-79
D	60-69
F	0-59

SPECIAL NEEDS REQUESTS: If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

Please refer to the RC Catalog for the Policies on Academic Dishonesty, Cheating, and Plagiarism, pg. 49.

Course Outline and Schedule

Week 1: Chapter 1: Equations and Inequalities
Homework 1 due by Tuesday 6/25
Introduction due by Tuesday 6/25 (2 pts. extra credit)
Homework 2 due by Thursday 6/27
Discussion 1 due by Thursday 6/27
Quiz 1, Thursday June 27
Chapter 1 Test, Friday June 28

- Week 2: Chapter 2: Graphs and Functions
Homework 3 due by Monday 7/1
Discussion 2 due by Tuesday 7/2
Quiz 2, Tuesday July 2
Homework 4 due by Wednesday 7/3
Discussion 3 due by Friday 7/5 (instead of July 4th)
Quiz 3, Friday July 5 (available starting July 4th)
Chapter 2 Test, Friday July 5
- Week 3: Chapter 3: Polynomial and Rational Functions
Homework 5 due by Monday 7/8
Discussion 4 due by Tuesday 7/9
Quiz 4, Tuesday July 9
Homework 6 due by Wednesday 7/10
Discussion 5 due by Thursday 7/11
Quiz 5, Thursday July 11
Chapter 3 Test, Friday July 12
- Week 4: Chapter 4: Inverse, Exponential, and Logarithmic Functions
Homework 7 due by Monday 7/15
Discussion 6 due by Tuesday 7/16
Quiz 6, Tuesday July 16
Homework 8 due by Wednesday 7/17
Discussion 7 due by Thursday 7/18
Quiz 7, Thursday July 18
Chapter 4 Test, Friday July 19
- Week 5: Chapter 5: Systems and Matrices
Homework 9 due by Monday 7/22
Discussion 8 due by Tuesday 7/23
Quiz 8, Tuesday July 23
Chapter 6: Analytic Geometry
Homework 10, due by Wednesday 7/24
Discussion 9 due by Thursday 7/25
Quiz 9, Thursday July 25
Chapter 5 & 6 Test, Friday July 26
- Week 6: **Project due Monday July 29** (assignment given July 22)
Chapter 7: Further Topics in Algebra
Homework 11 due by Tuesday 7/30
Discussion 10 due by Wednesday 7/31
Quiz 10, Wednesday July 31
Homework 12 due by Thursday 8/1
Chapter 10 Test, Thursday August 1
Final Exam, Friday August 2