

## Course Syllabus: College Algebra

**MATH 3A-56179**

**Instructor:** Mr. Steven Zook

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**Reedley College**

**Spring 2020**

**Office Hours:** MTWF 11am – 12 pm

Th (Virtual: zoom.us) 8:30 – 9:30 am

**Meeting Room:** Web

**Meeting Days:** 1/13 – 5/22

**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, Essentials of College Algebra, Pearson, 12<sup>th</sup> Edition, 2019. ISBN: 978-0-13-469702-4**

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 MyMathLab subscription and is accessed through Canvas.

**Required Course Material MyMathLab:** 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 Monday 1/27/20 may be automatically dropped from the course.**

**Office Hours:** I will be holding regular office hours. I want to be available to you if you need assistance outside of class. Please visit me during the scheduled times for drop-in questions. You may come unannounced during those times. If the scheduled office hours do not suit your schedule, you may arrange a time to meet me in my office. Please don't hesitate to take advantage of these since I want you to succeed – it's what I am here for.

**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. Most weeks 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. Any college course requires a time commitment from the very beginning. Therefore, **ANY missed assignment during the first three weeks 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:** Friday, March 13, 2020

**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 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 so we can arrange a different time.**

Throughout the course there will be regular **discussion questions** 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 answer an initial discussion question with a substantive solution by midnight of the due date each week. (2 points)
2. You are required to respond to two (2) classmates' solutions by the response due date (2 days later). (1 point each)

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 **five (5) chapter test** throughout the semester 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. **The lowest chapter test score will be dropped.**

Lastly, there will be a mid-term exam (cumulative for the first half) and a final exam (cumulative for the second half).

### **Assignment Categories and Weighting**

<i>Assignment</i>	<i>Weighting</i>
Online Homework	15%
Discussions	10%
Quizzes (10 @ 1% each)	15%
Project	10%
Chapter Tests	30%
Exams (Mid-term and Final)	20%

### **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, pp. 48-49.**

### **Course Outline and Schedule**

Week 1: Chapter 1: Equations and Inequalities  
**Homework 1** due by Thursday Jan 16  
**Quiz 1, Friday Jan 17**

Week 2: **Homework 2** due by Thursday Jan 23

**Quiz 2, Friday Jan 24**

- Week 3: **Discussion 1** due by Monday, Jan 27  
**Responses 1** due by Wednesday, Jan 29  
**Homework 3** due by Thursday, Jan 30  
**Chapter 1 Test, Friday, Jan 31**
- Week 4: Chapter 2: Graphs and Functions  
**Homework 4** due by Thursday, Feb 6  
**Quiz 3, Friday, Feb 7**
- Week 5: **Discussion 2** due by Monday, Feb 10  
**Responses 2** due by Wednesday, Feb 12  
**Homework 5** due by Thursday, Feb 13  
**Quiz 4, Friday, Feb 14**
- Week 6: **Discussion 3** due by Monday, Feb 17  
**Responses 3** due by Wednesday, Feb 19  
**Chapter 2 Test, Friday, Feb 21**
- Week 7: Chapter 3: Polynomial and Rational Functions  
**Homework 6** due by Thursday, Feb 27  
**Quiz 5, Friday, Feb 28**
- Week 8: **Discussion 4** due by Monday, Mar 2  
**Responses 4** due by Wednesday, Mar 4  
**Homework 7** due by Thursday, Mar 5  
**Quiz 6, Friday, Mar 6**
- Week 9: **Discussion 5** due by Monday, Mar 9  
**Responses 5** due by Wednesday, Mar 11  
**Homework 8** due by Thursday, Mar 12  
**Chapter 3 Test, Friday, Mar 13**
- Week 10: **Mid-Term Exam, Friday, Mar 20**
- Week 11: Chapter 4: Inverse, Exponential, and Logarithmic Functions  
**Homework 9** due by Thursday, Mar 26  
**Quiz 7, Friday, Mar 27**
- Week 12: **Discussion 6** due by Monday, Mar 30  
**Responses 6** due by Wednesday, Apr 1  
**Homework 10** due by Thursday, Apr 2  
**Quiz 8, Friday, Apr 3**

----- **Spring Break** -----

Week 13: **Discussion 7** due by Monday, Apr 13  
**Responses 7** due by Wednesday, Apr 15  
**Homework 11** due by Thursday, Apr 16  
**Chapter 4 Test, Friday, Apr 17**

Week 14: **Project due Friday, Apr 24**

Week 15: Chapter 5: Systems and Matrices  
**Discussion 8** due by Monday, Apr 27  
**Responses 8** due by Wednesday, Apr 29  
**Homework 12** due by Thursday, Apr 30  
**Quiz 9, Friday, May 1**

Week 16: **Discussion 9** due by Monday, May 4  
**Responses 9** due by Wednesday, May 6  
**Homework 13** due by Thursday, May 7  
**Quiz 10, Friday, May 8**

Week 17: **Discussion 10** due by Monday, May 11  
**Responses 10** due by Wednesday, May 13  
**Homework 14** due by Tuesday, May 14  
**Chapter 5 Test, Tuesday, May 15**

Week 18: **Final Exam, Thursday, May 21**

If any changes are made, I will announce them on Canvas.