



# Math 550.001 Abstract Algebra

## COURSE SYLLABUS: Summer 2022

**Instructor:** Rebecca Dibbs, PhD

**Office Location:** 318 Binnion

**Office Hours:** 1-2 pm on ZOOM

**Office Phone:** 468-8660

**University Email Address:** Rebecca.Dibbs@tamuc.edu

## COURSE INFORMATION

### Materials

**Textbook(s) Required:** Open source Abstract Algebra textbook by Judson & Beezer (provided in Dropbox)

### MATH 550 - Foundations of Abstract Algebra

Hours: 3

This course will cover the fundamental properties of algebraic structures such as properties of the real numbers, mapping, groups, rings, and fields. The emphasis will be on how these concepts can be related to the teaching of high school algebra.

Note: This course will be helpful to secondary teachers by giving them a better understanding of the terms and ideas used in modern mathematics. This is an elective course, eligible for the non-thesis option only. The maximum credit hours can be earned towards the MS degree in math among [MATH 500](#), 550, 560 is six. Prerequisites: [MATH 332](#) or or [MATH 500](#) with a minimum grade of C. Crosslisted with: [MATH 334](#).

# COURSE REQUIREMENTS

## Course Activities

**Videos: This is an online class. You are expected to watch all of the posted videos before the day one the schedule that covers those topics.**

**Video Check:** To ensure that you are prepared for the lab, there will be an open note quiz on D2L every day there is not a test. The quiz ends promptly after 20 minutes. Your lowest three grades will be dropped.

**Labs:** Every day, we will be working on labs. Labs will consist of a mix of problem sets and activities to help you master the material. Labs are due the day after the day you work on them in class; however, labs will be accepted until the midterm for Chapters 1-5 and until the final for chapters 6-13. Ten random problems from each lab will be graded on a 2 point scale. Your lowest two labs will be dropped

**The key to success in this course is regularly working with other students in the class and asking questions when you have them!!!** We will discuss lab problems in class, but there will often not be enough time to discuss all of them. Please come to office hours or visit the math tutoring lab if you have additional questions about the lab.

**Exams:** There will be a midterm and a final in this class. See course calendar for dates.

**Workload and Assistance:** You should expect to spend a **minimum of TWO to THREE HOURS every day**, outside of class, on the course material. This includes watching the videos, labs, and studying for quizzes and exams. Some weeks (those in which an exam is scheduled, for instance) may require more of your time, other weeks may require less, but *on average*, budget 8 to 12 hours each week. **I can't stress enough that in order to be successful in this class you should spend much of this time working with other students in the class!** Please ask questions and seek assistance as needed. You may email me at any time, and I encourage you to make use of my office hours

## GRADING

This class will be graded on a weighted percentage system. Percentages are assigned as follows:

Assignment	Total Points Possible
Video Check (3 drops)	10%
Labs (2 drops)	30%
Midterm	30%
Final	30%

All grades will be rounded to the nearest whole percent before grades are assigned. This means an 86.1 rounds to an 87 and is an A, while a 75.9 rounds to a 76 and is a C:

A: 87-100%

D: 57-66%

B: 77-86%

F: 0-56%

C: 67-76%

## TECHNOLOGY REQUIREMENTS

Use of a graphing calculator having at least the capabilities of the TI-83 will be helpful throughout the course. TI-89 is highly recommended. A computer algebra system will be used for some problem exploration, enhanced conceptual understanding, and to engage students as active participants in the learning process.

## COMMUNICATION AND SUPPORT

### Interaction with Instructor Statement

My primary form of communication with the class will be through Email and Announcements. Any changes to the syllabus or other important information critical to the class will be disseminated to students in this way via your official University Email address available to me through MyLeo and in Announcements. It will be your responsibility to check your University Email and Announcements regularly.

Students who Email me outside of regular office hours can expect a reply within 24 hours M-F. Students who Email me during holidays or over the weekend should expect a reply by the end of the next regularly scheduled business day.

## myLeo Support

Your myLeo email address is required to send and receive all student correspondence. Please email [helpdesk@tamuc.edu](mailto:helpdesk@tamuc.edu) or call us at 903-468-6000 with any questions about setting up your myLeo email account. You may also access information at <https://leo.tamuc.edu>.

# COURSE AND UNIVERSITY PROCEDURES/POLICIES

## Course Specific Procedures

### Academic Honesty

Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including (but not limited to) receiving a failing grade on the assignment, the possibility of failure in the course and dismissal from the University. Since dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. In **ALL** instances, incidents of academic dishonesty will be reported to the Department Head. Please be aware that academic dishonesty includes (but is not limited to) cheating, plagiarism, and collusion.

*Cheating* is defined as:

- Copying another's test or assignment
- Communication with another during an exam or assignment (i.e. written, oral or otherwise)
- Giving or seeking aid from another when not permitted by the instructor
- Possessing or using unauthorized materials during the test
- Buying, using, stealing, transporting, or soliciting a test, draft of a test, or answer key

*Plagiarism* is defined as:

- Using someone else's work in your assignment without appropriate acknowledgement
- Making slight variations in the language and then failing to give credit to the source

*Collusion* is defined as:

- Collaborating with another, without authorization, when preparing an assignment

If you have any questions regarding academic dishonesty, ask. Otherwise, I will assume that you have full knowledge of the academic dishonesty policy and agree to the conditions as set forth in this syllabus.

**Late Policy:** Late work/Make-ups will not be accepted without a documentable and valid excuse, because the lowest grade(s) in each category is dropped. Examples of documentable and valid excuses include:

- \*car accident w/ police report
- \*illness w/ doctor's note (you or your child)

- \*athletic or other mandatory extra-curricular travel
- \*field trip for another class
- \*being detained upon entering the country by Homeland Security

## **University Specific Procedures**

### **ADA Statement**

#### **Students with Disabilities**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

#### **Office of Student Disability Resources and Services**

Texas A&M University-Commerce  
Gee Library- Room 132  
Phone (903) 886-5150 or (903) 886-5835  
Fax (903) 468-8148  
[StudentDisabilityServices@tamuc.edu](mailto:StudentDisabilityServices@tamuc.edu)

### **Student Conduct**

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (*See Code of Student Conduct from Student Guide Handbook*).

## COURSE OUTLINE / CALENDAR

Note: **BOLD** indicates an assignment that is due that day. Although it is suggested to turn in your lab every day, labs will be accepted until the midterm for chapters 1-5 and for the final for chapters 6-13

<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>
1.1/1.2 <b>VC 1.1/1.2</b>	2.1 <b>VC 2.1</b>	2.2 <b>VC 2.2</b>	3.1 <b>VC 3.1</b>
3.2 <b>VC 3.2</b>	3.3/4.1 <b>VC3.3/ 4.1</b>	4.2 <b>VC 4.2</b>	5.1 <b>VC 5.1</b>
5.2 <b>VC 5.2</b>	<b>MIDTERM</b>	<b>6.1</b> <b>6.1 VC</b>	6.2/6.3 <b>6.2/6.3 VC</b>
9.1 <b>9.1 VC</b>	9.2 <b>9.2 VC</b>	10.1 <b>10.1 VC</b>	10.2 <b>10.2 VC</b>
11.1 <b>11.1 VC</b>	11.2 <b>11.2 VC</b>	13.1 <b>13.1 VC</b>	<b>FINAL EXAM</b>