



# Math 361.001 Pre-calculus for Middle School Teachers

## COURSE SYLLABUS: Fall 2015

**Instructor:** Rebecca Dibbs, PhD

**Office Location:** 303 Binnion

**Office Hours:** M-R 10-11 or by appointment

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## COURSE INFORMATION

### Materials

**Textbook(s) Required:** Pathways to Calculus (Carlson, Oehrtman, & Moore) 4<sup>th</sup> Edition. We will cover modules 1-8 and most of 11.

**Course Description:** Mathematics will serve as the basis of the course and the following topics will be covered: Mathematical modeling, transformation of functions, data analysis skills, linear models, exponential growth and decay, logarithmic functions, logistic models, power and polynomial models, inverse and direct variation, periodic models and trigonometric functions. Prerequisites: "C" or better in Math 351.

### Student Learning Outcomes

1. Students will demonstrate proficiency in the use of mathematics to structure their understanding of and investigate questions in the world around them.
2. Students will demonstrate proficiency in treating mathematical content at an appropriate level.
3. Students will demonstrate competence in the use of numerical, graphical, and algebraic representations.
4. Students will demonstrate the ability to interpret data, analyze graphical information, and communicate solutions in written and oral form.
5. Students will demonstrate proficiency in the use of mathematics to formulate and solve problems.
6. Students will demonstrate proficiency in using technology such as handheld calculators and computers to support their use of mathematics.

# COURSE REQUIREMENTS

## Course Activities

**Investigations:** On Tuesdays we will work in small groups on activities that develop the central concepts in the course. Attendance and participation is especially crucial on these days. You will turn in individual write-ups of these labs activities. It is also important to ask questions of the other groups (who will generally work on related but slightly different problems than your own group) when they present as you will be responsible for all the problems on exams.

**Homework:** Homework assignments will be assigned on a daily basis and will be closely based on the in-class explorations. Homework will be graded on a plus/check/minus basis for completion and overall quality.

**Attendance:** There may be topics covered in class that are not in the text. You are responsible for all material covered. I don't take attendance, but there is a strong correlation between attendance and final grades. Missing class more than once or twice during the semester is likely to affect your grade, either directly or indirectly. If you do miss class, you should get notes and/or handouts from your classmates and see me during office hours.

**The key to success in this course is regularly working with other students in the class, doing the homework early and asking questions when you have them!!!** We will discuss homework 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 homework.

**Exams:** We will have three exams (roughly covering Modules 1-3, 4-6, & 7-8), and a comprehensive final exam. Make-up exams are possible only if there is a *documented* emergency.

**Workload and Assistance:** You should expect to spend **8 to 12 hours each week**, outside of class, on the course material. This includes reading, homework, 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

. Assignments are weighted in the following manner:

Assignment	Weight
Tests	$3 \cdot 15\% = 45\%$
Final	25%
Investigations	25%
Homework	5%

All point totals will be rounded to the nearest whole percent before grades are assigned. Point ranges for final grades will be as follows:

A: 90-100% points  
B: 80-89% points  
C: 70-79%points

D: 60-69% points  
F: 0 – 59% points

## 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

### WEEKLY SCHEDULE:

Notation (2, 3) = Module 2, Exploration 3

[1-17] = homework problems assigned from the current module's homework set

Week	Tuesday	Thursday
1	(1,1) & (1,2)	(1,3) & (2,1) [1-17]
2	(2,2) (2,3) [18-38]	(2,4) & (2,5) [39-69 odd]
3	(2,6) & (2,7) [70-102 odd]	(3,1) & (3,2) [1-28 odd]
4	(3,3) & (3,4) [29-37]	(3, 4b) & (3,5) <i>Test 1 Blueprint</i> [39-64 odd]
5	(3,6) & (4,1) Test 1 available in Testing Center [65-78 & 1-6]	(4,2) & (4,3) Last Day to take Test 1 (Friday) [7-41 odd]
6	(4,4) & (4,5) [42-52]	(4,6) & (4,7) [53-62]
7	(4,8) & (4,9) [63-73]	(4,10) & (4,11) [74-81]
8	(5,1) & (5,2) [1-6]	(5,3) & (5,4) [8-11; 13-21 odd]
9	(5,5) & (6,1) [53-63 odd]	(6,2) & (6,3) <i>Test 2 Blueprint</i> [1-29 odd]
10	(6,4) & (7,1) Test 2 available in Testing Center [39-56 odd; 1-10]	(7,2) & (7,3) Last Day to take Test 2 (Friday) [11-26]
11	(7,4) & (7,5) [27-54 odd]	(7,6) & (7,7) [55-81 odd]

Week	Tuesday	Thursday
12	(7,8) & (8,1) [83-109 odd & 1-6]	(8,2) & (8,3) [7-21]
13	(8,4) & (8,5) <i>Test 3 Blueprint</i> [22-34]	<b>NO CLASS</b> Do (8,6) on own
14	(11,1) & (11,2) Test 3 Available in Testing Center [TBD]	(11,3) & (11,4) Last Day to Take Test 3 (Friday) [TBD]
15	(11,5) & (11,6) <i>Final Exam Blueprint</i> [TBD]	(11,7) & (11,8) [TBD]