



**Math 361.001**  
**COURSE SYLLABUS: Spring 2018**

**Instructor:** Dr. Pamela S. Webster  
**Office Location:** Binnion Hall Room 315  
**Office Hours:** MW 2pm – 3:30pm; Tues 1-3pm; by appointment  
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## **COURSE INFORMATION**

### **Materials – Textbooks, Readings, Supplementary Readings:**

**Textbooks:** Stewart, Redlin, Watson "Precalculus" 5<sup>th</sup> edition (2007), published by Brooks/Cole (currently Cengage). ISBN-10: 0-495-39276-6; ISBN-13: 978-0-495-39276-7

### **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. Prerequisite: Math 351.

### **Course Content:**

Modeling is a process that involves using mathematical concepts, functions, and structures to describe and explain real world phenomena or situations. In this course, we will cover reasoning, recursive thinking, and regression. Mathematical topics will include bivariate data analysis, linear relationships, and sequential use of linear and exponential models. Be prepared to discuss the *WHY* more than the *HOW*. This is important so that you will be able to **explain** to your future students the topics we will cover.

### **Student Learning Outcomes:**

Upon completion of this course, the successful student will be able to:

1. Demonstrate an understanding of the connections between the geometric, graphic, numeric, and symbolic representations of various functions.
2. Recognize, analyze, describe, and represent data in various functions.
3. Understand the effects of transformations on graphs of functions.
4. Understand rates of change and how they apply to different physical scenarios and data.
5. Judiciously use appropriate technology to achieve these outcomes.

## COURSE REQUIREMENTS

### Instructional Methods / Activities Assessments

**Instructional Methods:** Instruction will include lectures, demonstrations and models, and some group and individual work, based on the time available. Hands-on activities and several types of manipulatives will be used throughout. This course will be taught as a lecture course with activities mixed throughout. In particular, students will be expected to work on projects and activities that deal with statistical software and real world applications of the material learned.

**Attendance:** I will be taking roll every class. All students are expected to be present, and attendance will be reflected in your Daily Work grade. If you miss a class, come see me for any missed assignments. **Please do not approach me as I am beginning a class period**, unless it is an emergency, so that we might start ON TIME. Please be in your seat and ready to work when class begins.

**Daily Work:** Homework will be assigned most class periods. **It is extremely important for you to work all homework in order to be prepared for the exams.** We will also be working on certain supplemental assignments which will often have to be completed as homework. The total number of assignments that are completed and turned in (punctually) by the student will be reflected in the Daily Work grade. A grade will be taken on select problems from each homework assignment. **In general, late work will not be accepted.** A missed homework assignment or two, due to legitimate absence, will not adversely affect your grade as long as you have kept up with all other assignments.

**Quizzes:** Both individual and group quizzes may be given occasionally. Since regular attendance is expected, **In general, NO make-up quizzes will be given.** This class covers enough material that there is no time to be missed that is a “good time”, and each quiz will be over material to be emphasized on exams. Quizzes will be averaged into your Daily Work grade.

**Class Activities/Projects/Reflections:** Special projects will be assigned for students to work on outside of class. These projects will vary in their scope and should be completed neatly and punctually. In addition, you will be expected to keep a record of your reflections on the class and its material, as well as your reactions and future uses for the material. Each time you need to do a reflection, a prompt will be given to the class. You will need to keep up with your completed reflections in a separate location from notes, homework, etc. The reflections will be taken up at various, unannounced times throughout the semester. The reflections must be turned in when requested or they will not be graded. Late projects and reflections will not be accepted without a documented university excuse. Further information about the projects and reflections will be communicated to you during the semester. Regular attendance will assist students with being able to participate in these activities and projects.

**Tests:** Tests will be given after a complete chapter or subject area. These exams will be announced at least a week in advance. **CELL PHONES and other electronic devices must be turned off and stored out of the student's reach.** The only electronic device allowed during tests and quizzes is an approved stand-alone calculator, and only with the instructor's consent. Note: Calculators that solve problems for students, including but not limited to the TI-Nspire, TI-89, m Casio Prizm, Casio Touch, or higher, are **NOT** allowed to be used for exams.

There will be TWO "chapter" exams which may consist of a variety of problems and short answer questions. However, students should expect the bulk of the questions on each test to be problem solving. Partial credit may be given on exams IF all work is neatly shown so that I can easily determine the student's mistakes. When pictures are drawn, students should be careful that figures are clearly marked and easily understood. Explanations should be explicit and understandable to the audience given. Items should NOT need interpretation if full credit is to be given. **Tentative test dates (although not in stone) are: February 19<sup>th</sup> and April 2<sup>nd</sup>.**

**Replacing a Low Test Grade:** I realize that at times throughout the semester, emergency situations may arise that affect a student's performance on an exam or even prevent a student from attending on a test day. However, in general, **make-up exams will NOT be given unless confirmed ahead of time and accompanied by a documented, University excused absence.** Therefore, I am willing to replace the student's ONE lowest exam grade with the student's grade on the corresponding portion of the final exam, provided the grade on that section of the final exam is higher. This provision will only be applied to ONE exam, so students should make every effort to be present and well-prepared for all exams.

**Final:** Our final is a comprehensive exam. The Class Schedule gives our time to have our final exam as **Monday, May 7<sup>th</sup>, during class time.** **Do not expect a makeup exam for the final, outside of times we discuss in class.**

### **Grading Policy:**

<u>Section:</u>	<u>Total:</u>
Daily Work	15%
Teaching Assignments/Projects/Labs	20%
Tests (2 exams)	40%
Comprehensive Final	25%

### **Grading Scale:** Grades will be assigned using the standard scale:

A = 90-100+, B = 80-89, C = 70-79, D = 60-69, F = 59 or below

## TECHNOLOGY REQUIREMENTS

Internet access is REQUIRED. Projects, etc., will be given online. If you use the ebook, you will need to be able to access the site.

Word processing software (Microsoft Word preferred/compatibility required)

Email access is required. Please utilize your A&M-Commerce email address, or make me aware of your alternate email address. Also, access to MyLeo and eCollege

A TI-83 calculator (or equivalent) is REQUIRED for this course.

## COMMUNICATION AND SUPPORT

### **Interaction with Instructor Statement:**

Students will be expected to interact with the instructor(s) in class or via electronic means in an appropriate manner. All instructor contact information is listed on this syllabus and should be used. Please use email to facilitate a quick response.

## COURSE AND UNIVERSITY PROCEDURES/POLICIES

### **Course Specific Procedures:**

**Getting Help Outside of Office Hours:** The Math Skills Center, located in Binnion 328, is open Monday and Wednesday, 8am – 8pm; Tuesday and Thursday, 8am – 6pm; Friday, 8am – noon. For information on which tutors would be best to help, and when they are working, feel free to see me or the bulletin board outside the lab. Mach III/TRIO Services, located in the Halladay Student Services building, Room 300, is available to students who meet certain criteria, such as being a first-generation college student, etc. Contact TRIO at 903-886-5833. The Academic Success Center offers tutoring in the library, as well as Supplemental Instruction. Their hours can be found on the university web site.

**Comments:** I will do my best to make a quality presentation each day and, in return, I expect that you will do your best to learn the material presented in class and in the text. This course will be taught as hands-on as possible, and student participation is necessary daily. It is important that you be actively engaged in any group activities. Questions are welcome in the classroom, and I will gladly schedule outside help sessions if necessary. I know that together, these efforts can contribute significantly to your education in this class

**Students who are absent more than 6 times, for whatever reason, are subject to the instructor dropping them from the course.** Six absences in this course constitutes missing 1/5 of the course, which is a very large fraction of material for a student to miss. Any student who is close to this number of absences should come to the instructor before they accumulate four absences in the course.

**As stated in the Student Handbook, academic dishonesty in the class will not be tolerated.** If any materials or equipment are found to be available to the student at any time which is considered inappropriate by the instructor, the very fact that the materials are inappropriately available to the student is grounds for an accusation of academic dishonesty. The instructor reserves the right to fail the student for the assignment or the course, as well as report the student to the Academic Dean and/or the Dean of Students, and the Committee for Academic Retention in Teacher Education. The above committee and deans have the ability to terminate a student's participation in the teacher education program. They also have the ability to terminate the student's enrollment in the University. The instructor considers this an extremely serious matter. Please make sure you are not in a situation that could be viewed negatively.

I find that a majority of students are honest in doing their school work. However, we must take measures to protect the academic integrity of the classroom. **I have a NO TOLERANCE policy for cheating and if you are caught cheating, you will probably fail that portion of the course, as well as possibly the entire course.** Cheating in this course is defined as (but not limited to) the following:

- Giving or receiving answers during an exam or quiz.
- Viewing the exam or quiz answers of nearby classmates.
- Having notes/practice work/etc. available during quizzes or tests.
- Possession or access to test items before the test is given.
- Deception in getting an excused absence to obtain the undeserved opportunity to make-up work.
- Use of cell phones or text messaging technology/other devices during exams or quizzes. **You may not use the calculator on your cell phones.**
- Improper citations in written works, or using another person's ideas and words as your own without giving proper credit.
- **Any** method, no matter how well rationalized or accepted, which gives an unfair advantage and/or improves a person's grade by any means other than study and skillful performances on exams and/or other assignments.

Students found guilty of an act of academic dishonesty in this course will be subject to receiving an "F" in this course, as well as the below-mentioned disciplinary actions, as deemed appropriate.

**Specific additional disciplinary action for these offenses may include any combination of the following:**

- Point deduction of an assignment
- Failure of an assignment
- A grade of zero for an assignment
- Failure of this course
- Referral to the Academic Integrity Committee or department head for further action
- Referral to the Dean of the College of Science and Engineering, and other Deans as appropriate
- Referral to the University Discipline Committee

***Supplemental Instructions:*** Throughout the course of your work in this class, you will be given additional written instructions that govern the look, content and scope of your projects. These supplemental instructions have the same force as the syllabus for grading purposes.

**University Specific Procedures:**

*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*).

All students are expected to exercise self-discipline and respect for the rights of others at all times. Behavioral disruptions that interfere with the business of the classroom or with an individual's ability to learn may be referred to the Dean of Students.

Please be sure that cell phones and other electronic devices are off or silent. If you expect to have to get up, please select an inconspicuous position to minimize disruptions. Courtesy to others is important. That means respecting the opinions of others, and in general, doing your part to make this a positive learning environment for all students. Food and beverages, while acceptable, should be consumed as quietly as possible, and you must clean up after yourself.

*Anti-Discrimination*

A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information, or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

### *ADA Statement*

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 162**  
**Phone (903) 886-5150 or (903) 886-5835**  
**Fax (903) 468-8148**  
[StudentDisabilityServices@tamuc.edu](mailto:StudentDisabilityServices@tamuc.edu)  
[Student Disability Resources & Services](#)

### *Concealed Carry Statement:*

**Texas Senate Bill - 11** (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to:

(<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>) and/or consult your event organizer). Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

### *Early Intervention for First Year Students:*

Early intervention for freshmen is designed to communicate the University's interest in their success and a willingness to participate fully to help students accomplish their academic objectives. Grades for students in freshmen level classes will be reported to the Registrar's Office at the end of the fifth week of class during the fall and spring semesters. The Registrar's Office will report grades to students, Advising Services, Academic Departments (faculty advisors), and mentors. This procedure will allow students to be knowledgeable about their academic progress early in the semester. The university, through Advising Services, faculty advisors, and mentors, will take steps to assist students who may be experiencing difficulty to focus on improvement and course completion. Grade reports will be posted by the end of the sixth week of the semester.

*Mission for College of Science and Engineering: Innovation and Discovery*  
*Mission for the Department of Mathematics: Discovering the Keys to Success*

## COURSE OUTLINE/CALENDAR

The following is a list of topics to be covered. In general, these topics will be covered in such a way that one topic is covered each week. **Tests will tentatively be given during weeks six and twelve**, with the final exam being given during finals week, according to the online final exam schedule.

### Topics Covered (tentative schedule):

Week #1 (1/15 – 1/19)	Monday, January 15 = MLK DAY; NO SCHOOL. Review Algebra Chapters 1 – 3 on your own.
Week #2 (1/22 – 1/26)	Average Rate of Change/Slope/Function Families/Examining Graphs
Week #3 (1/29 – 2/2)	Tangent Lines/Secant Lines/Difference Quotients
Week #4 (2/5 – 2/9)	Using Average Rate of Change to interpret changes in graphs
Week #5 (2/12 – 2/16)	Writing Equations of Lines/Formulas for “Special” functions
Week #6 (2/19 – 2/23)	Review & <b>Exam 1</b>
Week #7 (2/26 – 3/2)	Average Rate of Change Vs. Instant Rate of Change/Limits
Week #8 (3/5 – 3/9)	Limits continued <b>**** SPRING BREAK!! ****</b>
Week #9 (3/19 – 3/23)	Begin Unit Circle and Trig Functions
Week #10 (3/26 – 3/30)	Terminal Points, Reference Angles, and Trig Functions
Week #11 (4/2 – 4/6)	<b>Exam 2</b>
Week #12 (4/9 – 4/13)	Technology/TI Connect/Rangers/Labs for Pre-Calculus
Week #13 (4/16 – 4/20)	AROC/IROC/Derivatives
Week #14 (4/23 – 4/27)	More Derivatives
Week #15 (4/30 – 5/4)	Review for Final
Week #16 (5/7 – 5/11)	<b>FINAL EXAM – MONDAY, MAY 7<sup>th</sup>, DURING CLASS TIME!</b>

*Remaining enrolled in this course constitutes acceptance of all policies contained in this syllabus.*

Any changes to this syllabus will be communicated directly to you in class by the instructor.  
You are responsible for being aware of any such changes.

***Good luck and work hard!!***