Math 362.001
COURSE SYLLABUS: Spring 2015

Instructor:  Dr. Pamela S. Webster
Office Location:  Binnion Hall Room 315
Office Hours:  Tuesday/Thursday, 10:45 – 11:30am & 2:15 – 3:00pm; Wednesday 10am - noon
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Office Fax:  903.886.5945
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COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings:

Other Calculus materials TBA.

Course Description:

Mathematics will serve as the basis of the course and the following topics will be covered:
Trigonometric functions and relationships, rate of change, derivative concepts, extrema and
points of inflection, accumulating change, concepts of the definite integral, finite difference
equations. Technology will be a vital part of the course. Prerequisite: Math 361.

Course Content:

Modeling is a process that involves using mathematical concepts, functions, and structures to
describe and explain real world phenomena or situations. Hands-on activities will intertwine the
mathematics concepts with science concepts (such as motion) and technology. 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 including trigonometric.
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, including the transition to derivative concepts.
5. Understand the role of the derivative in various applications.
6. Judiciously use of appropriate technology to achieve these outcomes.
**COURSE REQUIREMENTS**

**Instructional / Methods / Activities Assessments:**

**Instructional Methods:** The goal of this course is to develop understanding of the mathematics covered. We are constantly going to deal with WHY more than HOW. As a future teacher, you must be able to explain mathematics to your students, not just show them how to carry out the mathematical procedures. We will focus on underlying structures and development of ideas. In addition, problem solving is a major component of this course. As a future mathematics teacher, you need to become familiar with and skilled in various types of problem solving techniques that are commonly used in mathematical thinking. Class consists of various styles of presentation and interaction. You will be active participants regardless of the mode of instruction. You should come to class ready to participate, both in terms of preparation as assigned and with a positive attitude toward class and colleagues.

**Daily Work:** Homework will be assigned most class periods. This work should be done in groups when possible. *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. Selected papers will be turned in for a grade. If you work on these assignments in a group, one paper should be handed in for the entire group, with all names clearly marked. 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. **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, **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 averaged into your Daily Work grade.

**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.

**Teaching Assignments/Projects/Labs:** Approximately every other week, I will assign special projects for students to work on outside of class, sometimes in groups. These projects will vary in their scope and should be completed neatly and punctually. In addition, you will be expected to perform reflection activities. These will be typed papers that concentrate on a given prompt and are turned in at specific points of time in the semester. The reflections must be turned in when requested or they will not be graded. **Late reflections will not be accepted.** In addition, this course comes with a lab, which is scheduled the last 30 minutes of each class period. Some class periods will observe these lab periods while other class periods will consist entirely of lab activities and other class periods will consist entirely of covering material. During these labs, various activities will be set up throughout the semester for you and your classmates to work on, often in groups. It is the responsibility of the students to complete the labs, even if they do not complete them during the lab time. Therefore, please be certain to get what you need during the class period so that you will be able to complete the Lab if you run out of time in the classroom.
Tests: Tests will be given after a complete chapter or subject area. 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. Test dates are expected to be on: March 12th and April 23rd. These dates are subject to change, however. Any such changes will be communicated during regular classroom meetings.

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, 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 Tuesday, May 12th, at 1:15pm – 3:15pm. Do not expect a makeup exam for the final.

Grading Policy:

<table>
<thead>
<tr>
<th>Section:</th>
<th>Total:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Work</td>
<td>10%</td>
</tr>
<tr>
<td>Teaching Assignments/Projects/Labs</td>
<td>15%</td>
</tr>
<tr>
<td>Tests (2 exams)</td>
<td>50%</td>
</tr>
<tr>
<td>Comprehensive Final</td>
<td>25%</td>
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</tbody>
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The course will be graded on the standard scale of A: 90-100; B: 80-89; C: 70-79; D: 60-69; F: 0-59. For the Teacher Education program, students are required to receive a C or better.

TECHNOLOGY REQUIREMENTS

Internet access

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.

A TI-83 calculator (or above) is REQUIRED for this course. In addition to normal calculations, you will be using the CBR and CBL in the classroom and the calculator is necessary.
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. I am the director of the center and I do my best to place quality tutors in the lab. However, not all tutors are trained in techniques used in the Math Education courses. 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.

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.

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.

Academic Dishonesty: 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, 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 fail that portion of the course, as well as 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 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 above-mentioned disciplinary actions.**

**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 Education and Human Services, and other Deans as appropriate
- Referral to the University Discipline Committee
- Communication of student’s behavior to the Teacher Certification Office as constituting a reason to bar student from entering into or continuing in a teacher certification program (Procedures A 13.04, 13.12, 13.31, and 13.32)
University Specific Procedures:

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 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu
Student Disability Resources & Services

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.

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!!

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