Instructor: Hilary Dosser  
Email: dosserh@sfasu.edu  
Office: Math 333  
Phone: 936-468-1591

Class meeting times and places:
Section 012  TR 11:00-12:15  Math 205
Section 014  TR 12:30-1:45  Math 205

Office Hours: These hours have been set aside specifically to help students.
MWF 10:00-11:45
Additional times are available by appointment.

Course Description:
The core of this course is representing problems in mathematical terms then solving them. This is called mathematical modeling. We will particularly focus on solving equations, creating and interpreting functions, and graphically representing mathematical models. We will focus primarily on five models: linear, quadratic, higher polynomial, rational, exponential and logarithmic functions. Since it is difficult to make use of math without being able to read and communicate in the language of mathematics, this will be a focus of the course.

Student Learning Outcomes:
At the end of this course, successful students will be able to:
• Employ independence of thought in order to obtain solutions to typical algebraic problems.
• Solve algebraic equations.
• Demonstrate comprehension of the algebraic properties involved in solving algebraic equations.
• Read and interpret written mathematics.
• Communicate mathematics and logic at a college level.
• Use technology to evaluate solutions arrived at mathematically and intelligently interpret the results.
• Use functions to model and solve real-world problems.

This is a general education core curriculum course and no specific program learning outcomes for the major in mathematics are addressed in this course.

General Exemplary Educational Objectives:
All general education mathematics sequences in the state of Texas should equip students:
• To apply arithmetic, algebraic, geometric, higher-order thinking, and statistical methods to modeling and solving real-world situations.
• To represent and evaluate basic mathematical information verbally, numerically, graphically, and symbolically.
• To expand mathematical reasoning skills and formal logic to develop convincing mathematical arguments.
• To use appropriate technology to enhance mathematical thinking and understanding and to solve mathematical problems and judge the reasonableness of the results.
• To interpret mathematical models such as formulas, graphs, tables and schematics, and draw inferences from them.
• To recognize the limitations of mathematical and statistical models.
• To develop the view that mathematics is an evolving discipline, interrelated with human culture, and understand its connections to other disciplines.
Text and Materials:
- The textbook is *College Algebra*, 11th edition by Lial, Hornsby, Schneider, Daniels. Chapters 1 thru 5 of the textbook will be covered in this course.

- Online homework will be required using **My Math Lab** at www.mymathlab.com. When you create your account, use the correct course ID:
  - Section 012 (TR 11:00): dosser43647
  - Section 014 (TR 12:30): dosser50876

- You will need a scientific **non-graphing** calculator for this class. **The calculator function of a cell phone will not be permitted during tests or quizzes.**

Grading and Course Policies:
Your final grade will be determined as follows:

<table>
<thead>
<tr>
<th>%</th>
<th>Component</th>
<th>Grade Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Homework</td>
<td>90% - 100%</td>
<td>A</td>
</tr>
<tr>
<td>15</td>
<td>Quizzes</td>
<td>80% - 90%</td>
<td>B</td>
</tr>
<tr>
<td>10</td>
<td>Class Participation</td>
<td>70% - 80%</td>
<td>C</td>
</tr>
<tr>
<td>45</td>
<td>Tests (3 @ 15% each)</td>
<td>60% - 70%</td>
<td>D</td>
</tr>
<tr>
<td>20</td>
<td>Comprehensive Final Exam</td>
<td>0% - 60%</td>
<td>F</td>
</tr>
<tr>
<td>100</td>
<td>Final Course Grade</td>
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- Homework includes MyMathLab (online) homework and quizzes. It may also include worksheets and other homework assigned in class. **Homework and MyMathLab assignments will not be accepted late.**

- There will be a 5-minute quiz at the beginning of each class period over the previously assigned videos. **Quizzes cannot be made up.** If you are absent, you may replace the missing quiz/outline grade with the completed section outline within two class days. You may do this up to 3 times during the semester.

- During class, we will be working individually, in pairs, and in groups. Students will also be expected to present problems to the class. Your willingness to participate in these class activities will count for 10% of your overall grade.

- The final exam is comprehensive. Your final exam grade can be used to replace a low or missing exam grade. **Therefore, there will be no make-up exams.** If you miss an exam, your final exam grade will be substituted in place of the missing exam grade.

Exam Dates:
There will be three exams and a final exam.
Exam 1 – Thursday, February 11
Exam 2 – Thursday, March 10
Exam 3 – Tuesday, April 18
Final Exam – Section 012 (TR 11:00) – Tuesday, May 10, 10:30-12:30
Section 014 (TR 12:30) – Thursday, May 12, 10:30-12:30
Tentative Course Calendar:

<table>
<thead>
<tr>
<th>Tuesday</th>
<th>Thursday</th>
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<tbody>
<tr>
<td>Week 1 1.1 Linear Equations</td>
<td>1.2 Linear Modeling / Modeling with Chuck</td>
</tr>
<tr>
<td>Week 2 1.4 Quadratic Equations / 1.5 Modeling Quadratic Eqns</td>
<td>1.6/1.8 Other Eqns./Abs. Value</td>
</tr>
<tr>
<td>Week 3 2.1 Graphs of Equations</td>
<td>2.2 Circles</td>
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<tr>
<td>Week 4 Review</td>
<td>Exam 1</td>
</tr>
<tr>
<td>Week 5 2.3 Functions</td>
<td>2.4 Linear Functions / 2.5 Linear Eq. / 3.6 Direct Var.</td>
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<tr>
<td>Week 6 2.6 Graphs of Functions</td>
<td>2.7 Transformations</td>
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<tr>
<td>Week 7 2.8 Function Operations / 3.1 Quadratic Models</td>
<td>3.1 Quadratic Models / 3.2 Synthetic Division</td>
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<tr>
<td>Week 8 Review</td>
<td>Exam 2</td>
</tr>
<tr>
<td>Spring Break</td>
<td>Spring Break</td>
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<tr>
<td>Week 9 3.3 Zeros of Polynomials / 3.4 Polynomial Functions</td>
<td>Holiday</td>
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<tr>
<td>Week 10 3.5 Rational Functions</td>
<td>4.1 Inverse Function</td>
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<tr>
<td>Week 11 4.2 Exponential Functions</td>
<td>Log Discovery Worksheet / 4.3 Log Functions</td>
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<tr>
<td>Week 12 4.4 Evaluating Logs</td>
<td>Review</td>
</tr>
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<td>Week 13 Exam 3</td>
<td>4.5 Solving Exp/Log Eqns.</td>
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<td>Week 14 4.6 Exp &amp; Log Models</td>
<td>Radioactivity Activity</td>
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<tr>
<td>Week 15 5.1 Systems of Equations</td>
<td>Review</td>
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<tr>
<td>Finals</td>
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Supplemental Instruction (SI):
SI session times are being finalized, and will be announced during the first week of class.

Additional Help:
Free tutoring is available from the AARC. They offer one-on-one peer tutoring and the Math Walk-in Table. The hours for the Walk-in Table this fall will be 1pm to 9pm Monday, Tuesday, Wednesday, and Thursday as well as 4pm to 8pm on Sundays. Sign-ups for one-on-one tutoring begin Thursday, August 30th. It is a first-come, first-serve basis so you may want to register early. If you need help signing up, the AARC staff (first floor of library, right-hand side) will be happy to assist. You can find more information on the AARC website, www.sfasu.edu/aarc.

Tips for a Successful math class:

- Measure success as *understanding* and being able to do new problems, not as having completed the assignment.
- Try to understand definitions and solving approaches. See if you can find examples that work and examples that don’t.
- Take the time to read the book and **review your notes** before and after class.
- Practice homework problems until you can do it without referring to examples or help from your notes.
- Practice explaining big ideas and problem solving procedures in your own words, using complete sentences.
- Have someone check your work **after you have finished it** to help eliminate mistakes that you do not know you are making.
- Treat mistakes as a learning experience.
- Realize that math is hard. Some parts are harder for some people than others. Ph.D. mathematicians frequently find it hard to learn new things sometimes and make mistakes on things we already know. We have just learned to go back and refresh the basics, and keep working, even it takes hours, days, weeks, or years.
- Some people take longer to understand things than others. Evaluate how you study and seek to study smarter, not necessarily longer. If you are still stuck, get some help. The AARC and I are here for you!
University Policies:

- **Academic Integrity (A-9.1)** Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism. Definition of Academic Dishonesty Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit. Please read the complete policy at [http://www.sfasu.edu/policies/academic_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp).

- **Withheld Grades Semester Grades Policy (A-54)** Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average. The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

- **Students with Disabilities** To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to [http://www.sfasu.edu/disabilityservices/](http://www.sfasu.edu/disabilityservices/).

- **Acceptable Student Behavior** Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, University Policy 10.4). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.