MTH 138.500 – College Algebra – Online – Spring 2016

Name: Hilary Dosser
Department: Mathematics and Statistics Phone: 936-468-1591
Email: dosserh@sfasu.edu Office: Math 333

Class meeting time and place: Online course, d2l.sfasu.edu, Jan 19 – May 11

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, quizzes, and exams will be required using My Math Lab at www.mymathlab.com. When you create your account, use the course ID dosser65766

You will need a calculator for this class. A scientific calculator with log capabilities will be sufficient. **The calculator function of a cell phone will not be permitted during the midterm or final exam.**

Course Requirements:
There will be two online exams, a face-to-face midterm, and a face-to-face final exam.

- Online Exam 1 – complete by Friday, February 12
- Midterm – Wednesday, March 9, 4-8 pm SFA Math Building, Room 101
- Online Exam 2 – complete by Friday, April 15
- Final Exam – Wednesday, May 11, 4-8 pm, SFA Math Building, Room 101

**The midterm and final exam are both face-to-face exams.** They are both 2 hour exams and can be taken anytime between 4 and 8 pm on the above dates. If you have a conflict with the dates and times above, or would like to take the exam at a proctored testing location other than SFA, let me know as soon as possible before the exam so that other arrangements can be made. You will need to show a valid student ID or driver’s license with a recognizable picture in order to take the exams.

Grading Policy:
Your final grade will be determined as follows:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Component</th>
<th>Grade Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>Discussions</td>
<td>90% - 100%</td>
</tr>
<tr>
<td>15%</td>
<td>MyMathLab Homework Assignments</td>
<td>80% - 90%</td>
</tr>
<tr>
<td>15%</td>
<td>MyMathLab Quizzes</td>
<td>70% - 80%</td>
</tr>
<tr>
<td>10%</td>
<td>Online Exam 1</td>
<td>60% - 70%</td>
</tr>
<tr>
<td>20%</td>
<td>Midterm</td>
<td>0% - 60%</td>
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<tr>
<td>10%</td>
<td>Online Exam 2</td>
<td></td>
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<tr>
<td>20%</td>
<td>Final Exam</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>Final Course Grade</td>
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</table>

Discussions, assignments, quizzes, and exams will not be accepted late. Attempt all work well ahead of the due dates so that any mathematical and/or technical problems can be cleared up ahead of time.

Course Calendar:
Below is a tentative calendar for the course. The course is broken into fourteen learning modules. You are expected to review each learning module during the week it is assigned. After reviewing each module, you will be expected to read the corresponding sections in the textbook. You will also receive a list of practice problems for each section of the textbook covered. These problems will not be graded; however, they are good practice for the modules covered. These problems are assigned for your benefit. You are expected to attempt each practice problem and request help on the problems you cannot complete. There is also a corresponding MyMathLab online homework assignment for each section of the textbook, along with MyMathLab online quizzes covering two or three sections each. You are also expected to complete five discussions (in d2l) throughout the semester.

See the Schedule of Due Dates in the Getting Started Folder in d2l for specific due dates.
<table>
<thead>
<tr>
<th>Week</th>
<th>Module/Exam</th>
<th>Sections in Textbook</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1/19 – 1/22</td>
<td><strong>Module 1</strong> – Linear Equations and Modeling</td>
<td>1.1, 1.2</td>
</tr>
</tbody>
</table>
| 2 1/25 – 1/29 | **Module 2** – Quadratic Equations and the Quadratic Formula  
**Module 3** - Equations Involving Radicals, Fractions and Absolute Values | 1.4, 1.5, 1.6/1.8 |
| 3 2/1 – 2/5 | **Module 4** – Graphs and Lines | 2.1, 2.2 |
| 4 2/8 – 2/12 | Online Exam 1  
(MyMathLab) | 1.1 - 2.2 |
| 5 2/15 – 2/19 | **Module 5** - Functions and Graphs of Functions | 2.3, 2.4, 2.5/3.6, 2.6 |
| 6 2/22 – 2/26 | **Module 6** - Transformations of Functions  
**Module 7** - Algebra of Functions | 2.7, 2.8 |
| 7 2/29 – 3/4 | **Module 8** - Quadratic Models | 3.1 |
| 8 3/7 – 3/11 | Midterm  
(SFA Math Building Room 101) | 1.1 - 3.1 |
| 3/14 – 3/18 | Spring Break | |
| 9 3/21 – 3/25 | **Module 9** - Polynomials of Higher Degree and Polynomial Division | 3.2, 3.3, 3.4, 3.5 |
| 10 3/28 – 4/1 | **Module 10** - Rational Functions  
**Module 11** - Inverse Functions | 4.1 |
| 11 4/4 – 4/8 | **Module 12** - Properties of Exponential and Logarithm Functions | 4.2, 4.3, 4.4 |
| 12 4/11 – 4/15 | Online Exam 2  
(MyMathLab) | 3.2 – 4.4 |
| 13 4/18 – 4/22 | **Module 13** - Solving Exponential and Logarithm Equations | 4.5, 4.6 |
| 14 4/25 – 4/29 | **Module 14** - Solving Systems of Equations | 5.1 |
| 15 5/2 – 5/6 | Review for Final | |
| 16 5/9 – 5/11 | Final Exam  
(SFA Math Building Room 101) | 1.1 – 5.1 |
Additional Help: Free tutoring is available from the AARC. The AARC is located in the library on the SFA campus. They offer one-on-one peer tutoring and the Math Walk-in Table. The hours for the Walk-in Table are 1pm to 8pm Monday through Thursday as well as 4pm to 8pm on Sundays. Sign-ups for one-on-one tutoring begin soon. 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.

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, policy D-34.1). 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.

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/.

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

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.