Instructor: Amanda Granstad  
Office: IMG Academies Room 109  
E-Mail: amanda4136@yahoo.com or agranstad@usf.edu  
Office Telephone: 941-224-5300  
Office Hours: 6:00 – 7:00 Tuesdays & Thursdays

PREREQUISITES: C (2.0) or better in MAT 1033, or 490 or better SAT Math score, or 21 or better ACT Math score, or 90 or better Elementary Algebra CPT score, or 40 or better College-Level Math CPT score

COURSE DESCRIPTION: Concepts of the real number system, functions, graphs, and complex numbers. Analytic skills for solving linear, quadratic, polynomial, exponential, and logarithmic equations. Mathematical modeling of real life applications. College Algebra may be taken either for General Education credit or as preparation for a pre-calculus course.

COURSE TOPICS: Chapters 1, 2, 3, and (part of) 7 will be covered. Topics are as follows:
   - Chapter 1: Graphs and Functions
   - Chapter 2: Polynomial and Rational Functions
   - Chapter 3: Exponential and Logarithmic Functions
   - Chapter 7: Systems of Equations and Inequalities (Sects. 7.1, and 7.3 only)

COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES:  
Upon completion of this course, students will be able to:
1. Examine the graphs of equations, lines, and functions.
2. Understand the difference between slope-intercept form, point-slope form and standard form for equations, lines and functions.
3. Interpret and calculate the slope of lines and functions.
4. Understand the different transformations of various functions.
5. Interpret and graph piece-wise functions.
6. Be able to combine functions and use composition of functions.
7. Define and use inverse functions with real world applications.
8. Solve problems modeled by quadratic functions.
9. Identify the relationship between degrees, real zeros, and turning points of polynomial functions.
10. Use synthetic division to find zeros of a polynomial functions.
11. Interpret and graph rational functions.
12. Know the difference between exponential and logarithmic functions and use them to solve a variety of real world applications.
13. Use substitution and elimination to solve systems of equations.

TEXT AND MATERIALS:  
*Precalculus, A Unit Circle Approach*, by Ratti and McWaters, 2nd Ed  
*MyMathLab* software, published by PEARSON/Addison Wesley

CANVAS USE: The class syllabus is posted in Canvas, an online course management system. In this class Canvas will be used for grades and announcements. Information on how to use Canvas is available at: [http://usfsm.edu/e-learning-services/student-resources/](http://usfsm.edu/e-learning-services/student-resources/)
COMPUTER LAPTOP USE: Laptops will be permitted on specific days for specific purposes and may always be sued before and after class for questions on homework on Mymathlab.

CALCULATOR USAGE: Any scientific or graphing calculator may be used for this course. Calculators may not be shared during quizzes, tests, or the final exam.

GRADING, EVALUATION AND ATTENDANCE POLICIES:

Homework Requirement: All students will be required to complete and submit homework via the MyMathLab feature that accompanies the text. As such, each student will need to obtain his/her own access to MyMathLab by registering at www.coursecompass.com. Note that access to MyMathLab requires payment of the appropriate fee either included with a new textbook, paid separately to the publisher, or by purchasing an access kit at a bookstore. Homework must be completed by assigned deadline in order to earn credit.

Records: You should keep all returned tests until you receive your final grade. You will need your tests to demonstrate that a grade was incorrectly recorded, should that happen.

Grading Policy: Your grade in the course is determined by the percentage of categories earned during the SEMESTER. You will have homework, quizzes, and tests. If you take all four scheduled exams, the best three scores from the four scores earned on three exam scores and one quiz-exam score (the average of quiz scores) determines 60% of your grade, your homework determines 15% of your grade. Your score on the algebra common final determines the remaining 25%. If you miss an exam for a valid reason, see the make-up policy. Grades, and the averages corresponding to them, are found on the supplemental material provided via blackboard, and are part of the syllabus for this course.

Make-Up Exams: Make-up exams may be requested if an exam is missed for a valid reason. The request for a make-up exam must be made the next time you attend class, and confirmed via e-mail. Make-up exams will be given on the last day of final exam week, at a time to be announced later in the semester. If you schedule a make-up and fail to take it, you earn a zero on that exam and that zero will be used in computing your exam average. NO makeup quizzes will be given under any circumstances.

Final Exam: There will be a 2-hour common final; this will be cumulative and all questions will be multiple choice. The date and time for this exam are Tuesday, December 9, 7:00 p.m. to 9:00 p.m. (See note below about time conflicts.) Your instructor will notify you of its location. The common final counts as 25% of your grade. The remaining 75% of your grade will be determined as specified by your instructor.

Time Conflicts with the scheduled Final Exam time (December 9 at 7:00 p.m.): Students who normally work during the scheduled time of the final exam are expected to make arrangements with their employer to get time off. Students who have another common final exam scheduled during this same time period that has higher priority in USF’s exam conflict policy, will be permitted to take a makeup. You must submit proof that such a conflict exists.

Final Grades: The University’s +/- grading policy will be used in assigning final grades. If your overall percentage of total points falls into the following range, you will receive the corresponding grade:

<table>
<thead>
<tr>
<th>Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>97-100</td>
<td>A+</td>
</tr>
<tr>
<td>93-96</td>
<td>A</td>
</tr>
<tr>
<td>90-92</td>
<td>A-</td>
</tr>
<tr>
<td>87-89</td>
<td>B+</td>
</tr>
<tr>
<td>83-86</td>
<td>B</td>
</tr>
<tr>
<td>80-82</td>
<td>B-</td>
</tr>
<tr>
<td>77-79</td>
<td>C+</td>
</tr>
<tr>
<td>73-76</td>
<td>C</td>
</tr>
<tr>
<td>70-72</td>
<td>C-</td>
</tr>
<tr>
<td>67-69</td>
<td>D+</td>
</tr>
<tr>
<td>63-66</td>
<td>D</td>
</tr>
<tr>
<td>60-62</td>
<td>D-</td>
</tr>
<tr>
<td>0-59</td>
<td>F</td>
</tr>
</tbody>
</table>
**Attendance:** If you are going to miss a class please let me know. I can scan and email the notes to you and you may come during office hours or before or after class for help on material you missed.

**USFSM AND USF SYSTEM POLICIES**

**A. Academic Dishonesty:** The University considers any form of plagiarism or cheating on exams, projects, or papers to be unacceptable behavior. Please be sure to review the university’s policy in the USFSM Catalog, the USF System Academic Integrity of Students, and the USF System Student Code of Conduct.

**B. Academic Disruption:** The University does not tolerate behavior that disrupts the learning process. The policy for addressing academic disruption is included with Academic Dishonesty in the USFSM Catalog, USF System Academic Integrity of Students, and the USF System Student Code of Conduct.

**C. Contingency Plans:** In the event of an emergency, it may be necessary for USFSM to suspend normal operations. During this time, USFSM may opt to continue delivery of instruction through methods that include but are not limited to: Canvas, Elluminare, Skype, and email messaging and/or an alternate schedule. It’s the responsibility of the student to monitor Canvas site for each class for course specific communication, and the main USFSM and College websites, emails, and MoBull messages for important general information. The USF hotline at 1 (800) 992-4231 is updated with pre-recorded information during an emergency. See the Campus Police Website for further information.

**D. Disabilities Accommodation:** Students are responsible for registering with the Office of Students with Disabilities Services (SDS) in order to receive academic accommodations. Reasonable notice must be given to the SDS office (typically 5 working days) for accommodations to be arranged. It is the responsibility of the student to provide each instructor with a copy of the official Memo of Accommodation. Contact Information: Disability Coordinator, 941-359-4714 http://usfsm.edu/disability-services/

**E. Fire Alarm Instructions:** At the beginning of each semester please note the emergency exit maps posted in each classroom. These signs are marked with the primary evacuation route (red) and secondary evacuation route (orange) in case the building needs to be evacuated. See Emergency Evacuation Procedures.

**F. Religious Observances:** USFSM recognizes the right of students and faculty to observe major religious holidays. Students who anticipate the necessity of being absent from class for a major religious observance must provide notice of the date(s) to the instructor, in writing, by the second week of classes. Instructors canceling class for a religious observance should have this stated in the syllabus with an appropriate alternative assignment.

**G. Web Portal Information:** Every newly enrolled USF student receives an official USF e-mail account. Students receive official USF correspondence and Canvas course information via that address.

**GENERAL INSTRUCTION FOR STUDENTS**

**A.** If you ever need help with any of the topics please let me know and you may come during office hours for additional help.

**B. Academic Support Services:**

Information Commons provides students with individual and group study spaces, computers, printers, and various media equipment for temporary use. Information Commons is staffed with a librarian, learning support faculty, tutors, and technology and e-learning specialists. Students challenged by the rigors of academic writing, mathematics, or other course content are urged to contact their professors early in the semester to chart out a plan for academic success, and/or regularly use the tutoring services provided by the Learning Support Services, which are provided at no cost to students.
Getting Help:
- The MyMathLab software provides considerable tutorial help.
- There is a Student Solutions Manual available as a companion to the text. It contains answers to all the odd-numbered problems. There is also a Study Guide that has detailed explanations and worked-out practice problems.
- Additional practice exams in multiple choice formats can be found at http://mathcenter.usf.edu/. First choose College Algebra, then PRACTICE TEST, and finally ACE INTERACTIVE PRACTICE TEST. Other practice exams are also available at that site.

Course Content

Chapter 1: Graphs and Functions
1.1 Graphs of Equations
1.2 Lines
1.3 Functions
1.4 A Library of Functions
1.5 Transformations of Functions
1.6 Combining Functions; Composite Functions
1.7 Inverse Functions

Chapter 2: Polynomial and Rational Functions
2.1 Quadratic Functions
2.2 Polynomial Functions
2.3 Dividing Polynomials and Rational Zeros Test
2.5 Rational Functions
2.6 Variation

Chapter 3: Exponential and Logarithmic Functions
3.1 Exponential Functions
3.2 Logarithmic Functions
3.3 Rules of Logarithms
3.4 Exponential and Logarithmic Equations and Inequalities

Chapter 7: Systems of Equations and Inequalities
7.1 Systems of Equations in Two Variables
7.8 Systems of Inequalities
Weekly Schedule for MAC 1105
Fall 2014

Below is a tentative weekly schedule:

Chapter 1

Week 1: sections 1.1 & 1.2
Week 2: sections 1.3 & 1.4
Week 3: section 1.5
Quiz 1.1 – 1.3  9/11/14
Week 4: sections 1.6 & 1.7
Test Ch 1  9/23/14

Chapter 2

Week 5: sections 2.1
Week 6: sections 2.2 & 2.3
Quiz 2.1 – 2.3  10/7/14
Week 7: section 2.5
Week 8: section 2.6
Test Ch 2  10/16/14

Chapter 3

Week 9: sections 3.1 & 3.2
Week 10: section 3.3
Quiz 3.1 – 3.3  10/30/14
Week 11: sections 3.4 & 3.5
Test Ch 3  11/13/14

Chapter 7

Week 12: section 7.1
Week 13: sections 7.3
Week 14: Review
Week 15: Review for the Final Exam

Final Exam  Tuesday, December 9, 2014