

Math 081 #53895
Spring 2012

Intermediate Algebra Overview

Name _____

T H 1:30 pm – 4:00 pm in U86
Santiago Canyon College, Math and Science Division

Instructor: Kathy Moore **E-mail:** moore_kathy@sccollege.edu
Office: U84 **Phone:** 714-628-4923 **Website:** www.sccollege.edu/kmoore
Office Hours: Monday 12:30 – 1:30 (U-84); 4:00 – 4:30 (); 7:00 – 8:00 pm (U-84)
 Wednesday 12:30 – 1:30 (U-84); 4:00 – 4:30 (); 7:00 – 8:00 pm (U-84)

Math Study Hall (MaSH) (U80) Hours: _____

Math Study Hall (MaSH): The MaSH is a service provided by SCC that gives you a chance to supplement learning done in the classroom. There will always be a math faculty member, instructional aides and student workers on duty to assist you when needed. There are also computers where you can access mathematical software or do work for your on-line math class. You **must** complete 16 hours during the semester in the Math Study Hall, or your letter grade will be drop by one level. Attendance is tracked through the sign-in computer. When you enter MaSH, you will slide your student ID card or type in your ID number at the sign-in computer (no SSN). When you leave, you will sign out the same way. Signing out is very important. You may lose hours you put in if you do not sign in and out appropriately.

Text: *Intermediate Algebra*, 2nd edition, by Michael Sullivan III and Katherine Struve, Pearson Prentice Hall, 2007. ISBN-10: 0321567528 which includes *MyMathLab*.

Software: *MyMathLab* software is included as a bundle with the purchase of the book, or can be purchased as a stand alone kit for a discounted price at the bookstore or online for a higher fee. Note, if you purchase *MyMathLab*, you receive an electronic file of the textbook. You could purchase just the software and have the ebook included which is less expensive. Website: <http://www.coursecompass.com>
It is recommended that you sign up with MyMathLab and keep your email current there in case I need to send a message to the class. Also homework must be done on-line – provides immediate feedback & help.

*** ** Your course id code: moore77638 *** **

Course Description and Purpose: The purpose of this course is to strengthen your arithmetic skills with emphases on problem-solving and development of critical thinking skills. Topics covered include functions, systems of equations, inequalities, exponents and radicals, quadratic functions, complex numbers, and exponential and logarithmic functions. As a result of completing Math 81 students will be able to:

1. Read, define and apply algebraic and functional vocabulary and symbols
2. Evaluate and perform algebraic operations on rational, radical, exponential and log expressions
3. Set up and solve word problems involving quadratic, rational, absolute value, radical, exponential and logarithmic expressions
4. Graph linear, quadratic, absolute value and power functions, apply graphing transformations and find the equation of linear functions given appropriate information.

Prerequisite: Successful completion of Math 060 or equivalent skills (as measured by a satisfactory score on the Math Level 2 exam in combination with an Elementary Algebra course).

Attendance: Attend every class! If you must miss class, make arrangements to get class notes and assignments from another student. Attendance will be taken at each class meeting. A student may be dropped due to excessive absences (4 or more). Please let me know if an emergency occurs which affects your attendance.

Withdrawals: If you decide to drop this class and stop attending, it is your responsibility to turn in a drop card to the Admissions Office (E-101). The last day to drop and receive a “W” grade is Apr. 22, 2012. You may take this course for “Pass/No Pass” and the last day to file is Feb. 24, 2012.

Homework: In any math course, it is essential to get “hands on” experience with the concepts. Watching me do algebra is easy; you need to do it yourself in order to really learn the material. One important way to do this is by doing your homework. Homework is not to give you busy work or drill. Don’t think of your homework as a certificate proving that you have done the assignment. Think of it as an exercise in learning and in reporting what you have learned. Plan to spend at least two hours per one hour of class on your homework. You should be spending 10 hours every week on this class – reading the textbook, doing homework, re-writing notes and studying for tests. Homework is due by the next class meeting.

Homework will be assigned twice weekly consisting of exercises from MyMathLab software. It is your responsibility to have all of the problems completed correctly and if you have any questions about any homework problems, we can discuss them in class or during my office hours. Homework turned in on-line will be graded on the percentage of exercises that are answered correctly; your total percentage at the end of the course will be the points you receive for your homework portion of your final grade. Note, you do not have to complete a section in one sitting. If you complete part of an assignment, you can return to it later, as long as the due date has not passed. To keep on schedule, the sections discussed during the class must be completed by the next class meeting. The deadline for each day’s homework will be next class meeting at 1:29 pm before class begins. Work the homework problems on paper and then enter the answers into the software system. I will collect the work you do to complete all homework problems on test days for full credit on homework. The written solutions to homework problems is worth 20% of your homework grade.

There will be no exceptions regarding the due dates unless at the end of the semester you have completed 95% of all on-line homework assignments in MML. You will be able to access the homework on-line past the due date and to work on those problems. Last day to complete any homework for credit is May 15th at 1:29 pm.

Reading the textbook is important. The text has convenient examples throughout the chapter. You should read the text and work these problems – checking solutions as you go, then work the homework problems.

Supplies: A scientific calculator is required. A graphing calculator is permitted with the exception of the TI-89 or TI-92. Note, cell phone or PDA calculators of any kind are forbidden from being used in this course. You will also need a colored pen or pencil, graph paper, and you may want to acquire a 1.5 or 2 inch loose-leaf binder as well as a stapler for stapling homework together. One 882-E scantron for the final exam.

MaSH Lab Activities:

Lab #1 – Must have 3 hours completed in MaSH. Should have 2 Plato/DLA’s or 20 Kahn Academy.

Lab #2 – Must have 4 Plato/DLA’s or 40 Kahn Academy Exercises (Work Horse badge) completed. Should have 6 hours in MaSH completed.

Lab #3 – Must have 10 hours completed in MaSH. Should have 6 Plato/DLA’s or 60 Kahn Academy.

Lab #4 – Must have 8 Plato/DLA’s or 80 Khan Academy Exercises (Magellan Sun badge) completed.

Must have all 16 hours of MaSH completed by Thursday May 10th at 7 pm.

Kahn Academy Exercises– must complete Work Horse Earth badge (40 exercise sets) or complete Magellan Sun Badge (80 exercise sets) – also add me as a coach www.kahnacademy.org

Plato - For Plato module you must complete the tutorial, application and mastery test passed at 80%:

Any modules listed on the back of the Pre-tests or Factoring: Sums and Difference of Cubes;

Factoring: Factoring Trinomials, Part 2; Exponentials & Logarithms: Properties of Logarithmic

Functions; Exponentials & Logarithms: Solving Problems, Exponential and Logarithmic

DLA’s -Individual DLA’s can be found in MaSH by working with an Instructional Assistant.

Accommodations for Disabilities: Students with verifiable disabilities who want to request academic accommodations are responsible for notifying me and Disabled Students Programs and Service (DSPS) as early as possible in the semester. To arrange for accommodations, contact DSPS at (714) 628-4860, (714) 639-9742 (TTY) or stop by the DSPS Center in E-105.

Student Conduct: All students are responsible for maintaining appropriate conduct while enrolled in classes through the Rancho Santiago Community College District (RSCCD). Guidelines for student conduct are set forth in the RSCCD "Standards of Student Conduct" policy. Detailed information regarding student discipline and rights within this policy is available in the college catalog and student handbook. Students who violate the Standards of Conduct are subject to disciplinary action which includes, but is not limited to, removal from class, suspension and expulsion.

Student Honesty: There will be several opportunities for collaborative activities in this class; however, collaborating on class tests or quizzes will not be tolerated. Anyone seeking help from or providing assistance to another student on a test or quiz will receive a zero. Homework is expected to be individual work.

Test Rules: *No looking at another students' desk or paper*
No sharing of supplies or calculators
No talking or using cell phones

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|----------------|---|-----------------------------------|---------|---|--------|---|
| Grades: | The course grade will be based on: | The grading scale will be: | | | | |
| | Tests | 50-55% | 90-100% | A | 60-69% | D |
| | Quizzes/Plato modules | 8 - 10% | 80-89% | B | 0-59% | F |
| | Homework/Handouts | 8 - 10% | 70-79% | C | | |
| | Final exam | 25-30% | | | | |

Tests and Quizzes:

- A) A pre-test covering pre-requisite material will be administered during the first week of class. You must pass (8/10 or higher) this pre-test to pass the class. It will be given again 3 more times during the semester after a regularly scheduled test – once you have passed a pre-test you do not have to take it again. In order to take the pre-test again you will need completed at least half of the Lab activities. [These are listed on the back of the pre-test.]
- B) There will be 20 in class mini quizzes each worth 2 points. They are only given to students present in class. There are no make-up quizzes for absent or late students. There are 10 online quizzes worth 3 points each.
- C) There will be four 130-point comprehensive tests. Dates are on the attached schedule, but may change if the instructor finds it necessary and such changes will be announced in advance in class or through email.
- D) Tests must be taken on designated days; no make-ups will be given! If an emergency occurs, you must **call me** before the test to tell me that you will be absent. A **one-time** test replacement grade may be used if a test is missed, only if I am notified in advance, by substituting the percentage from the final.
- E) To assist you in preparing for tests, you will have an opportunity to work with MaSH Lab Activities. You will be required to do 8 modules (4 points each). You must have the first 2 modules completed by **Thurs. 2/9**, the second 2 modules by **Tues. 2/28**, third set of 2 by **Thurs. 4/5** and the last set of 3 by **Thurs. 5/3**. *If and only if* these deadlines are met, you may complete up to 3 additional Plato modules or Kahnacademy Badges by **Tues. 5/8** (3 points each).
- F) A comprehensive final exam will be given. It is worth 280 points. (Thursday, May 17 in this classroom). A scientific or graphing calculator may be used. The final is worth 25-30% of your grade so take the time to prepare!

Cell Phone Policy: All cell phones and electronic devices should be turned "OFF" (not on "silent," not on "vibrate," not "on") during the entire class period. I truly believe electronic devices are a distraction to the instructor, to other students, and to the user. My goal is to create the most effective environment conducive to learning. If there is an emergency situation, you must inform me before class begins. If you are addicted to texting, find another class immediately.

Based upon the RSCCD Standards of Student Conduct, students will be in violation of the code should you disrupt the teaching of this class. This includes excessive talking with your peers and **any** cell phone usage, including texting. Penalties that may be invoked include warnings, probation and suspension from all classes and activities within the district.

By remaining enrolled, students hereby agree that they will be held responsible for items described in this overview and in the schedule.

How to survive this course:

- A) Keep this overview and notify me of any trouble you are having in this course.
- B) You are required to read all sections of the text to supplement the lecture because it is impossible to cover all the material in class. Class lectures make more sense if you have read the material before the date on the schedule. Plan also to re-read each section after it is discussed in class.
- C) Give yourself plenty of time outside of class to review your notes, read the text, work homework problems and study. If possible, set up a study group of 1-5 other students. Studying with others can help you with questions you may find difficult and force you to communicate solutions to other students. The best way to learn a subject is to teach it.
- D) Focus on vocabulary!! Don't get behind. Keep a positive attitude. Get help when you need it.

| Moore | | | Math 81 Class Schedule | | | TH Spring 2012 | | |
|------------|---------------|--------------------------------|--------------------------------|--------------|--------------------------------|---------------------------------|--------------------------------|--|
| Date | Section | Topic | Date | Section | Topic | | | |
| Jan | 24 | 1.1/1.2 | Intro, Linear Equations | Mar | 27 | 6.3 | Simplify Radical Express. | |
| Feb | | 1.2/1.3 | Problem Solving | | | 6.4 | +/- /x Radical Express | |
| | 26 | 1.4 | Linear Inequalities | 29 | 6.5 | Rat'lizing Radical Express | | |
| | | 1.5 | Graphs of Equations | | | 6.6 | Functions involving Radicals | |
| | 31 | 1.6 | Linear Eqns in 2 Variables | Apr | 3 | 6.7 | Radical Eqns and Applications | |
| | | 1.7 | Parallel & Perpendicular Lines | | | 6.8 | The Complex Number System | |
| | 2 | 2.1 | Relations | 5 | Rev | | | |
| | | 2.2 | Intro to Functions | | | Test 3 | 1.1 – 2.6, 4.1 – 6.8 Lab #3 | |
| | 7 | 2.3 | Functions and Graphs | 10 | 8.1 | Composite and Inverse Functions | | |
| | | 2.4 | Linear Functions & Models | | | 8.2 | Exponential Functions | |
| | 9 | Rev | | 12 | 8.3 | Logarithmic Functions | | |
| | Test 1 | 1.1 – 2.4 Lab #1 | | | | Building Linear Models | | |
| 14 | 2.5 | Compound Inequalities | May | 17 | 8.4 | Properties of Logarithms | | |
| | 2.6 | Abs. Value Equations | | | 8.5 | Exponential & Log Functions | | |
| 16 | 4.1 | Add/Subtr Polynomials | 19 | 7.1 | Solving Quad Eqns by CTS | | | |
| | 4.2 | Mult Polynomials | | | 7.2 | Solving Quad Eqns by Q. F. | | |
| 21 | 4.3 | Divide Polynomials | 24 | 7.3 | Solving Eqns Quad in Form | | | |
| | 4.4 | GCF; Factor by Grouping | | | 7.4 | Graphing w/Transformations | | |
| 23 | 4.5 | Factor Trinomials | 26 | 7.5 | Graphing w/Quad Properties | | | |
| | 4.6/4.7 | Factor Special Products | | | 7.6 | Quadratic Inequalities | | |
| 28 | Rev | General Strategies | 1 | Rev | | | | |
| | Test 2 | 1.1 – 2.6, 4.1 – 4.7 Lab #2 | 3 | Rev | | | | |
| Mar | 1 | 4.8 | Polynomial Equations | | | Test 4 | 1.1 – 2.6, 4.1– 8.5 Lab #4 | |
| | | | | 8 | 3.1 | System of Eqns in 2 Variables | | |
| 6 | 4.8 | Polynomial Equations | | | 3.2 | Problem Solving w/Systems | | |
| | 5.1 | Mult/Div Rat'l Express. | 10 | 3.3 | Systems of Eqns in 3 Variables | | | |
| 8 | 5.2 | Add/Sub Rat'l Express | | | | MaSH hours completed | | |
| | 5.3 | Complex Rat'l Express. | 15 | Review | | | | |
| 13 | 5.4 | Rat'l Equations | | | | | | |
| | 5.5/5.6 | Rat'l Inequalities & Models | 17 | Final | Comprehensive – need scantron | | | |
| 15 | 6.1 | nth Roots and Rat'l Expnts | | | | | | |
| | 6.2 | Laws of Exponents | | | | | | |