

Spring 2017 - College Algebra

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Office Hours: T/TH: 3:35–5:20 & F: 8:00–12:30

Other times may be available by appointment.

Course Description: MATH 1314. COLLEGE ALGEBRA. (3:3:1) Prerequisite: Two units of high school algebra or MATH 0320. A standard course in college algebra. Quadratic equations; ratio and proportion; variation, binomial theorem; progressions; inequalities; complex numbers; theory of equations; determinants and matrices; linear programming; mathematical induction; permutations and combinations. (Copied from the current SPC catalog.)

Textbook: Blitzer, R. (2014). College Algebra, 6th Edition. New Jersey: Pearson Prentice Hall. ISBN 978-0-321-78228-1.

The hardcopy is optional. MyMathLab will be required.

Course Objectives: Successful completion of this course should reflect mastery of the following objectives.

- 1. Solve and graph problems involving linear, quadratic, exponential, and logarithmic functions
- 2. Solve and graph linear, quadratic, and rational inequalities
- 3. Identify and simplify complex numbers
- 4. Apply midpoint, distance, and circle formulas
- 5. Analyze and graph polynomial functions
- 6. Analyze and graph rational functions
- 7. Create and solve systems of equations with algebraic techniques, with matrix techniques, and with determinants

Texas Success Initiative (TSI): The Texas Success Initiative is a state program designed to ensure that all Texas institutions provide placement testing, personal advisement and appropriate instruction to students to enhance their opportunities for success in their college studies. All new students entering Texas colleges and universities are required to take a placement test prior to enrolling in college-level courses, unless exempt from testing under specified state standards (i.e., scores on ACT, SAT or TAKS). Testing will indicate whether a student possesses adequate basic college-level skills in reading, writing and mathematics necessary to begin an undergraduate program of study. (Copied from the current SPC catalog.)

Attendance: Attendance and effort are the most important activities for success in this course. To maximize the potential to complete the course, a student should attend all class meetings, take notes, participate in class, and complete all homework assignments. Class attendance may be taken at any time during the class period, so please do not be late or leave early. You may be dropped from this course with a grade of X or F if you are absent four consecutive classes or if you exceed six absences throughout the semester. Be on time and turn off any cell phones or pagers before entering the classroom.

Assignments: Homework assignments are based on graded problems worked online via MyMathLab. I encourage you to purchase your textbook immediately and use the Access Code Packet (bundled with your textbook) to register for this class online. If you were enrolled in a College Algebra class that used MyMathLab, you do not need a new packet.



MyMathLab: Follow these steps for a painless registration procedure.

Before you start, you will need:

- A student's access code is found in your MyMathLab Student Access Kit that comes with the book.
- The course ID number will be given to you the first day of class.
 Course ID number for your course: frank59745
- Or you can purchase online an access code using a credit card.
- A valid email address that you check on a regular basis.
- SPC Zip Code: 79336

To register and enroll in a pearsonmylabandmastering course (same as Course Compass which has been changed):

- 1. Go to <u>www.pearsonmylabandmastering.com</u> and click the Register button for student and follow instructions to register. I suggest you bookmark this if you are using your personal computer.
- 2. After you have register, enter the Login Name and Password you created during registration.
- 3. You will be taken to MyLabandMastering the online learning environment for MyMathLab. From this page, simply click the name of your course to begin exploring MyMathLab.

If you want to register as a previous user, use the following instructions:

- 1. Click on Login. Do not enter login name or password.
- 2. Click on students register.
- 3. Click on continue a course, re-take a course, or switch to a different course section.
- 4. Enter user name and password from previous semester and course ID number.
- 5. Click on login.

OR you can:

- 1. Log in using username and password from a previous time.
- 2. Under name of previous MyMathLab course, click on enroll in a new course.
- 3. Put in new course ID number.

Important Note: The homework problems assigned online via MyMathLab are required and are the only homework grades given in this class. If you do not have a personal computer or your computer is in serious need of an upgrade, there are many computer labs on the Reese Center campus, the Levelland campus, and the ATC which have very liberal hours. On the Reese campus, the lab with tutors is in building 4 in the basement. These problems on-line (homework) are chosen as representative of the basic concepts presented in the sections. These few questions will not adequately prepare you for the unit test. A more comprehensive assignment for each section is located in the textbook. The textbook exercises will not be taken up or graded, but should be used to ask questions in class over the assignment. Before completing the online homework for a grade, you should work the textbook problems for a more complete understanding of the topics.



| Grading: | | G | rading Scale: | A | 90-100 |
|----------|------------|-----|---------------|---|-------------|
| | Homework | 30% | | В | 80-89 |
| | Unit Exams | 60% | | C | 70-79 |
| | Final Exam | 10% | | D | 60-69 |
| | | | | F | 59 or below |

Exams: There will be 4 unit tests and a comprehensive final exam. Dates for the exams are given on the course outline. If for any reason you are unable to take an exam at the designated time you must contact me *prior* to class time. Make-up exams will be given at the discretion of the instructor.

Tutoring: Free tutoring is available in room M116 of the Math Building in Levelland, or room 208 in building 2 at the Reese campus, or in the computer lab at the ATC. Digital versions of tutorial videos can be viewed on your personal computer on Blackboard, http://spc.blackboard.com. Login using "mvideos" and password "mvideos". Click on Math-Math Videos and locate the appropriate course and topic in which you are interested.

Supplies: You will need pencils, a scientific or graphing calculator, notebook paper, graph paper, and a 3-ring binder. Calculators on cell phones or other electronic devices with a computer algebra system will not be allowed during testing.

Student Conduct: You are expected to be respectful to others in the classroom. Please assist in maintaining a classroom environment conducive to learning. Any student disrupting the learning environment will be asked to leave and may be dropped from the course.

Disability: Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office at Levelland Student Health & Wellness Center 806-716-2577, Reese Center (also covers ATC) Building 8: 806-716-4675, Plainview Center Main Office: 806-716-4302 or 806-296-9611, or the Health and Wellness main number at 806-716-2529.

Equal Opportunity: South Plains College strives to accommodate the individual needs of all students in order to enhance their opportunities for success in the context of a comprehensive community college setting. It is the policy of South Plains College to offer all educational and employment opportunities without regard to race, color, national origin, religion, gender, disability or age.

Diversity: In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.



Spring 2017 - College Algebra Tentative Schedule

| Week | Day | Date | Lesson |
|------|-------------|--------------|---|
| 1 | Tuesday | January 17 | WELCOME! |
| | | • | |
| | Thursday | January 19 | 1.2 Linear Equations and Rational Equations |
| _ | | | |
| 2 | Tuesday | January 24 | 1.4 Complex Numbers |
| | Thumaday | Ionuami 26 | D.5 Factoring Polymomials |
| | Thursday | January 26 | P.5 Factoring Polynomials |
| 3 | Tuesday | January 31 | 1.5 Quadratic Equations |
| | Tuesday | variatily 21 | The Quadrate Equations |
| | Thursday | February 2 | 1.6 Other Types of Equations |
| | | | |
| 4 | Tuesday | February 7 | 1.7 Linear Inequalities and Absolute Value Inequalities |
| | TD1 1 | F 1 0 | T 4 |
| | Thursday | February 9 | Exam 1 |
| 5 | Tuesday | February 14 | 2.1 Basics of Functions and Their Graphs |
| | Tuesday | restairy 11 | 2.11 Business of 1 unertoins und Thori Oraphis |
| | T11 | F-116 | 2.3 Linear Functions and Their Graphs |
| | Thursday | February 16 | 2.4 More on Slope |
| | | | |
| 6 | Tuesday | February 21 | 2.8 Distance and Midpoint Formulas; Circles |
| | Thundan | Falson 22 | 2.1 Overdentia Evertiana |
| | Thursday | February 23 | 3.1 Quadratic Functions |
| 7 | Tuesday | February 28 | 3.2 Polynomial Functions and Their Graphs |
| , | 1 trostatty | 1 0010001 20 | 0.2 1 organisma 1 should also 1 hour orașilo |
| | Thursday | March 2 | 3.3 Dividing Polynomials |
| | | | |
| 8 | Tuesday | March 7 | 3.4 Zeros of Polynomial Functions |
| | TD1 1 | N/ 1.0 | |
| | Thursday | March 9 | Exam 2 |
| | | March 13-17 | SPRING BREAK |
| | | Water 13 17 | DI KING DILIM |
| 9 | Tuesday | March 21 | 3.5 Rational Functions and Their Graphs |
| | | | • |
| | Thursday | March 23 | 4.1 Exponential Functions |
| 4.0 | m . | | |
| 10 | Tuesday | March 28 | 4.2 Logarithmic Functions |
| | Thursday | March 30 | 4.3 Properties of Logarithms |
| | Thursday | IVIAICII 30 | 4.5 Froperities of Logarithms |
| 11 | Tuesday | April 4 | 4.4 Exponential and Logarithmic Equations |
| - 1 | 1 acsuay | 1 pili T | T.T Exponential and Eogarianine Equations |



| | Thursday | April 6 | Exam 3 |
|-----|----------|-----------|---|
| | | | |
| 12 | Tuesday | April 11 | 5.1 Systems of Linear Equations in Two Variables |
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| | Thursday | April 13 | 5.2 Systems of Linear Equations in Three Variables |
| | | | |
| 13 | Tuesday | April 18 | 5.4 Systems of Nonlinear Equations in Two Variables |
| | | | 7.7.7 |
| | Thursday | April 20 | 5.5 Systems of Inequalities |
| 1.4 | T. 1 | A :1.05 | |
| 14 | Tuesday | April 25 | 6.1 Matrix Solutions to Linear Systems |
| | Thumsday | A mmil 27 | Exam 4 |
| | Thursday | April 27 | Exam 4 |
| 15 | Tuesday | May 2 | Final Exam Review |
| | | · | |
| | Thursday | May 4 | Final Exam Review |
| | | | |
| 16 | | | Final Exam |

^{*}Last Day to Drop: April 27th