South Plains College
Mathematics Department
College Algebra – MATH 1314
Course Syllabus – Fall 2017

Instructor: Karol Albus
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Office hours: Monday : 11:00-2:00, Tuesday: 9:45-10:4, Thursday: 9:45-10:45, Friday: 9:00-12:00 Other times by appointment.

Disclaimer: The instructor reserves the right to alter any class policies/dates as deemed necessary by the instructor, and will announce any changes in class.

Please check your email regularly as it is they only way I have to contact you outside of class.

Course Description: MATH 1314 - College Algebra (3:3:1) 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. Semester Hours: 3, Lecture Hours: 3, Lab Hours: 1. Pre-requisite: Two units of high school algebra or MATH 0320.

Course Objectives: Successful completion of this course should reflect mastery of the following objectives. Chapter and section numbers are indicated in parentheses.
1. Solve and graph problems involving linear, quadratic, exponential, and logarithmic functions; (1.2, 1.3, 1.5, 1.6, 2.1, 2.2, 2.3, 2.4, 3.1, 4.1, 4.2, 4.3, 4.4)
2. Solve and graph linear, quadratic, and rational inequalities; (1.7, 3.6, 5.5)
3. Identify and simplify complex numbers; (1.4)
4. Apply midpoint, distance, and circle formulas; (2.8)
5. Analyze and graph polynomial functions; (3.2, 3.3, 3.4)
6. Analyze and graph rational functions; (3.5)
7. Create and solve systems of equations with algebraic techniques, with matrix techniques, and with determinants; (5.1, 5.2, 5.4, 6.1, 6.5)
8. Apply the Binomial Theorem to expand binomials of higher degree. (8.5)

Textbook: The textbook required for this course may be any of the following:
Blitzer, R. (2007). College Algebra, 7th ed. New Jersey: Pearson Prentice Hall. ISBN 0-13-446916-X
Blitzer, R. (2007). College Algebra, 6th ed. New Jersey: Pearson Prentice Hall. ISBN 0-321-78228-1
Blitzer, R. (2010). College Algebra, 5th ed. New Jersey: Pearson Prentice Hall. ISBN 0-321-55983-5
Blitzer, R. (2010). College Algebra, 4th ed. New Jersey: Pearson Prentice Hall. ISBN 0-13-219141-5

Supplies: You will need a 3 ring binder (1.5 inch), dividers, paper, graph paper, hole punch, textbook, pencils, and erasers. **You will be allowed the use of a scientific calculator most of the time. (You will want one that has logarithms). However, it will be restricted on some days. You may NOT use your cell phone/iPad as your calculator, TI-83, TI-84, TI-89, TI-92 or TI-Nspire.** These are pretty basic supplies, but you will need to bring them to each class. I require pencil on all graded work. You will have one warning, and after that, you will earn a zero on that work because you failed to follow my instruction.

Assignment Policy: Homework will be assigned at each class meeting. The homework is not a tool by which I torture you, but rather an opportunity for you to practice the skills presented in class which you will be responsible to demonstrate on a quiz the following class period. If you are interested in passing the class, you will need to do well on the quizzes. To do well on the quizzes, you will need to complete the homework. **No late assignments will be accepted.** You should show all work when doing homework. Simply writing the problem and the answer is not "doing homework." Using a solutions manual or an app that shows you the steps, and copying them down is NOT "doing homework." **Remember your effort is key to your success. You have to**

focus your effort on being able to complete the problems on a quiz/exam without any outside resources. Some days you will turn in your homework when you take a quiz. 50% of your grade will be from the homework and 50% from the quiz. Keep all class materials (notes, handouts, homework, quizzes, and exams) organized in a notebook (3-ring binder). These materials are subject to be turned in for grading at any time. Please make certain all materials accompany you to each class meeting.

Attendance: Attendance and effort are the most important activities for success in this course. Class attendance may be taken at any time during the class period, so please do not be late or leave early. Leaving early and being tardy will be considered ½ absence. **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 five absences (for any reason) throughout the semester.** If you should incur an absence, please refer to your syllabus, contact the instructor, or contact another student to get the assignment completed BEFORE the next class. **Late homework and makeup quizzes are not an option.** Make ups for **Exams** will only be provided under extreme, documented circumstances. If at all possible, the instructor should be notified prior to the exam day.

Grading: Daily work (homework, quizzes, notebook) will count for 16% of the final grade. Expect four major exams (16% each) throughout the course and a **comprehensive** final exam (20%) at the end of the course. **Remember that no late or makeup work will be accepted. If you are not in class you will earn a grade of 0 for homework/quiz on that day.** Your final average in the course will determine the letter grade posted on your transcript. This grade is determined by the following scale: A (90-100%), B (80-89%), C (70-79%), D (60-69%), F (0-59%).

Grade Reporting: Grades will be posted on blackboard. If you think I have recorded a grade incorrectly, please notify me immediately. I keep a hard copy of my grades and will be glad to check it and correct it if necessary. I usually update my grades once a week or every other week.

Phones and other electronics: All electronic devices are inappropriate. Suspected use will earn you a zero for that day's quiz or homework. If you use an electronic device (cell phone, iPad, iPod, headphones) during an exam, you will earn a zero on the exam and may be dropped from the course. Please do not use a phone or iPad as your book or calculator.

Test days: Once you begin the exam, you will not be allowed to leave the classroom until the exam is submitted for grading. Use the restroom before class. Use of electronics during an exam earns you a zero on the exam and possible dismissal from the course.

Where to Get Help:
- Me! – My office hours are listed at the top of this syllabus. I am also available at some other times by appointment. Email is a great way to contact me – much faster than phone calls and messages. Sometimes I can help on email if you will send a photo of the problem you are doing. Even if I am not in the office, I can work the problem, take a photo and send back. You CANNOT ask for #35 – I won't have my book with me.
- Free tutoring is available in M116 on the Levelland campus. The hours for tutors are posted by that door.
- Occasionally I will post helpful items on blackboard such as solution sets. **If you are not familiar with Blackboard, you should become familiar**. Login at http://spc.blackboard.com. The user name and password should be the same as the MySPC and SPC email.
  User name: first initial, last name, and last 4 digits of the Student ID
  Password: Original CampusConnect Pin No. (found on SPC acceptance letter) Questions regarding Blackboard support may be emailed to blackboard@southplainscollege.edu or call 806-716-2180.
- Your book is a great resource and it is already purchased!
- You can also seek videos from www.patrickjmt.com and www.khanacademy.org or others.
- **I also strongly recommend forming study groups so that you can work with others. Networking is an essential tool both in the classroom and in the workforce.**

You should expect to spend time outside of class practicing homework problems and studying. The goal is for you to acquire the skills necessary to be successful in your next MATH course. I WILL NOT send you to the next course if you cannot demonstrate that you have those skills.

Communication Skills: effective development, interpretation, and expression of ideas through written, oral, and visual communication.

      Develop, interpret, and express ideas through written communication
      Develop, interpret, and express ideas through oral communication
      Develop, interpret, and express ideas through visual communication

Critical Thinking: creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.

      Generate and communicate ideas by combining, changing, and reapplying existing information
      Gather and assess information relevant to a question
      Analyze, evaluate, and synthesize information

Empirical and Quantitative Competency Skills: the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

      Manipulate and analyze numerical data and arrive at an informed conclusion
      Manipulate and analyze observable facts and arrive at an informed conclusion

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 Office) 806-716-2577, Reese Center (Building 8) & Lubbock Center 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

Non-Discrimination Statement South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College - 1401 College Avenue, Box 5, Levelland, TX 79336, 806-894-9611

Campus Concealed Carry - Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations, please refer to the SPC policy at:
(http://www.southplainscollege.edu/human_resources/policy_procedure/hhc.php)
Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

College Algebra Tentative Course Outline
Tues/Thurs MATH 1314.009 (8:00-9:45), 1314.014 (2:30-4:15)
Fall 2017

Week	Day	Date	Lesson / Tentative Assignment
1	Tues	Aug 29	Assignment 1: [1.2] Linear & Rational Equations
	Thurs	Aug 31	Assessment and Assignment 2: [1.3] Linear Applications
	Mon	*Sept 4*	*Labor Day Holiday*
2	Tues	Sept 5	Assignment 3: [1.4] Complex Numbers; [1.5] Quadratic Equations
	Thurs	Sept 7	Assignment 4: [1.5] Quadratic Equations
3	Tues	Sept 12	Assignment 5: [1.6] Other Types of Equations; [1.7] Linear & Absolute Value Inequalities
	Thurs	Sept 14	Assignment 6: Review
4	**Tues**	**Sept 19**	**Exam 1**
	Thurs	Sept 21	Assignment 7: [2.1 & 2.2] Functions and Their Graphs
5	Tues	Sept 26	Assignment 8: [2.3 & 2.4] Linear Functions and Slope
	Thurs	Sept 28	Assignment 9: [2.8] Distance, Midpoint, & Circles, [2.6] Combinations of Functions, Composite Functions
6	Tues	Oct 3	Assignment 10: [2.7] Inverse Functions; [3.1] Quadratic Functions
	Thurs	Oct 5	Assignment 11: [3.3]Dividing Polynomials Long and Synthetic; [3.4] Rational Zero Theorem
7	Tues	Oct 10	Review
	Thurs	**Oct 12**	**Exam 2**
	Fri	Oct 13	Fall Break
8	Tues	Oct 17	Assignment 12: [3.2] Polynomial Functions & Their Graphs, [3.4] Roots of Polynomials
	Thurs	Oct 19	Assignment 13: [3.5] Rational Functions & Their Graphs
9	Tues	Oct 24	Assignment 14: [3.6] Polynomial & Rational Inequalities
	Thurs	Oct 26	Assignment 15: [4.1] Exponential Functions; [4.2] Logarithmic Functions
10	Tues	Oct 31	Assignment 16: [4.3] Properties of Logarithms; [4.4] Exponential Equations
	Thurs	Nov 2	Assignment 17: [4.4] Exponential & Logarithmic Equations
11	Tues	Nov 7	Assignment 18: Chapters 3 & 4
	Thurs	**Nov 9**	**Exam 3 (16%)**
	Mon	*Nov 13*	*Online Registration for Spring 2018 Opens*
12	Tues	Nov 14	Assignment 19: [5.1] 2x2 Systems; [5.2] 3x3 Systems
	Thurs	Nov 16	Assignment 20: [5.4] Nonlinear Systems; [5.5] Systems of Inequalities
	Thurs	*Nov 16*	*Last Day to Drop a Class*
13	Tues	Nov 21	Assignment 21: [6.1] Matrix Solutions to Systems
	Thurs	*Nov 23*	*Thanksgiving Break*
14	Tues	Nov 28	Assignment 22: [6.5] Determinants & Cramer's Rule
	Thurs	Nov 30	Review
15	**Tues**	**Dec 5**	**Exam 4**
	Thurs	Dec 7	Assignment 23: [8.5] The Binomial Theorem and Comprehensive Review
16		**Dec 11-14**	**Finals**
			MATH1314.009 Dec 12 (Tues) 8:00-10:00
			MATH1314.014 Dec 12 (Tues) 1:00-3:00