

South Plains College
 Department of Mathematics & Engineering
 Math1314 – College Algebra
 Course Syllabus – Spring 2019

Instructor: Jerod Clopton
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Office Hours:

Monday	Tuesday	Wednesday	Thursday	Friday
2:00 – 4:00	10:00 – 11:00	2:00 – 4:00	10:00 – 11:00	10:00-12:00
Or by appointment				

Course Information

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 MATH0320.

Student Learning Outcomes:

1. Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.
2. Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.
3. Apply graphing techniques.
4. Evaluate all roots of higher degree polynomial and rational functions.
5. Recognize, solve and apply systems of linear equations using matrices.

Course Supplies:

- **Required:** Scientific Calculator (with log and ln). **Graphing calculators are not allowed.**
- **Required:** Large 3-ring binder, dividers, notebook paper, graph paper, hole punch, pencils, and erasers.
- **Optional:** (textbook) College Algebra with Intermediate Algebra, A Blended Course, by Beecher / Penna / Johnson / Bittinger, ISBN-9780134556505.
- **Warning:** Do not expect your instructor to have supplies for you to borrow.

Course Assessment

Homework: Homework from each section covered will be available online via Blackboard. Instructions for purchasing and accessing the online program will be provided in class. Consistently working problems reinforces the skills and concepts presented, and is essential for success in this course. Work problems early enough to seek help if necessary. A notebook or binder is recommended to organize your work and assist in answering questions. Expect to spend *at least* two hours outside of class for each hour you spend in class working on math. Homework comprises 10% of your overall average.

Quizzes: Periodic quizzes will be given during lab time. To do well on the quizzes, you need to be consistently completing the homework. Focus your effort on being able to complete the problems on a quiz/exam without any outside resources. **There is NO makeup for in-class quizzes and a grade of zero will be assigned.** Quiz grades comprise 10% of your overall average.

Exams:

- 4 Unit Exams – 16% each
- Final Exam is comprehensive.
- There are no exemptions for the final.
- If you are going to miss an exam contact your instructor immediately (preferably prior to the exam). Make up exams are very rare and only be provided under extreme, documented circumstances.
- Once you begin an exam, you will not be able to leave the classroom until the exam is submitted for grading.
- The grade from the final exam will also replace your lowest exam grade, as long as the grade from the final exam is greater than your lowest exam grade.

Grading Formula:

Enrollment in this course does not guarantee advancement to the next course level. The final responsibility for learning lies with the student. The final letter grade for this course will be based on the following:

4 Tests 16% each	64%
Homework/Quizzes	20%
Final Exam.....	16%

Final Grade Determination: A(90-100%), B(80-89%), C(70-79%), D(60-69%), F(0-59%)

Additional Statements

Classroom Etiquette:

- **Class attendance is expected, not optional.** 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 1/2 of an 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**).
- Preparation for class (including homework) is to be completed before – not during – the lecture.
- Chronic tardiness (entrance after lecture has begun) is unacceptable.
- NO tobacco use of any form is allowed in the classroom.
- Discussion of course material among students is encouraged during class, but habitually disruptive students will be asked to leave.
- All electronic communication devices are to be silenced and put away during class.

Resources:

- Blackboard! The course syllabus, handouts for notes, homework, quiz keys, and reviews will be available on Blackboard.
- Free tutoring is available in M116 on the Levelland campus. Hours for the tutors will be posted by there.
- I am available to help you! Feel free to come by during my office hours or email me at jclopton@southplainscollege.edu

Use of Student Email: The College provides a free, official email account to all students to ensure efficient and secure communications between you and the College and your instructors. Students will be required to use their college-issued email address to communicate with their instructors and all other college personnel, so it is easy to distinguish a student's email from spam. The College expects that students will utilize their college email addresses to send and receive communications with college personnel and will read email on a frequent and consistent basis.

Withdrawal Policy: As required by Texas Education Code Section 51.907, all new students who enroll in a Texas public institution of higher education for the first time beginning with the 2007 fall semester and thereafter, are limited to six course drops throughout their entire undergraduate career. All course drops, including those initiated by students or faculty and any course a transfer student has dropped at another institution, automatically count toward the limit. After six grades of W are received, students must receive grades of A, B, C, D, or F in all courses. There are other exemptions from the six-drop limit and students should consult with a Counselor/Educational Planner before they drop courses to determine these exemptions. Students receiving financial aid must get in touch with the Financial Aid Office before withdrawing from a course. It is the student's responsibility to drop. Excessive absences (4 consecutive or 5 total) will result in an administrative withdrawal with a Grade of X or F. If you plan to withdraw, please consult with the instructor immediately.

Note: The last day to drop with a grade of W is Thursday, April 25, 2019.

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.

Diversity Statement

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.

Disabilities Statement

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) 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. Phone number 806-716-2360.

Title IX Pregnancy Accommodations Statement

If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To activate accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange accommodations. Contact Crystal Gilster, Director of Health and Wellness at 806-716-2362 or email cstraface@southplainscollege.edu for assistance.

Campus Concealed Carry Statement

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 and Frequently Asked Questions, please refer to the Campus Carry page at: <https://www.southplainscollege.edu/campuscarry.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.

Course Calendar – Spring 2018

Week	Date	Topic	Knewton Assignment
1	Mon, Jan 14	Syllabus; Assessment	
	Wed, Jan 16	Linear & Rational Equations	<ul style="list-style-type: none"> Solve Linear Equations in One Variable Solve Rational Equations
	Fri, Jan 18	Linear Applications	<ul style="list-style-type: none"> Word Problems with Linear Equations
2	Mon, Jan 21	Martin Luther King Holiday	
	Wed, Jan 23	Complex Numbers	<ul style="list-style-type: none"> Basics of Complex Numbers Operations on Complex Numbers
	Fri, Jan 25	Quadratic Equations	<ul style="list-style-type: none"> Solve Quadratic Equations by Factoring Complete the Square Quadratic Formula
3	Mon, Jan 28	TBA	
	Wed, Jan 30	Other Types of Equations	<ul style="list-style-type: none"> Solve Higher Order Equations with Factoring Solve Equations Quadratic in Form by Factoring Solve Radical Equations Solve Other Types of Equations
	Fri, Feb 01	TBA	
4	Mon, Feb 04	Linear & Absolute Value Inequalities	<ul style="list-style-type: none"> Interval Notation and Inequalities Absolute Value Equations and Inequalities
	Wed, Feb 06	TBA	
	Fri, Feb 08	Review	
5	Mon, Feb 11	Exam 1 (16%)	
	Wed, Feb 13	Functions and Their Graphs	<ul style="list-style-type: none"> Relations and Functions One-to-One Functions Function Notation Domain and Range of Functions Piecewise Functions Graphical Properties of Functions Difference Quotients Transformation of Functions Even and Odd Functions
	Fri, Feb 15	TBA	
6	Mon, Feb 18	Linear Functions and Slope	<ul style="list-style-type: none"> Interpretations of Linear Functions Application of Linear Functions
	Wed, Feb 20	Distance, Midpoint, and Circles	<ul style="list-style-type: none"> Cartesian Coordinates and Distances Graphs of Circles
	Fri, Feb 22	Combinations and Composition of Functions	<ul style="list-style-type: none"> Combination of Functions Evaluate Composite Functions Properties of Composite Functions
7	Mon, Feb 25	TBA	

	Wed, Feb 27	Inverse Functions	<ul style="list-style-type: none"> • Inverse Function Values • Find Inverse Functions
	Fri, Mar 01	Quadratic Functions	<ul style="list-style-type: none"> • Characteristics of Parabolas • Graphs of Quadratic Functions • Applications of Quadratic Functions
8	Mon, Mar 04	Synthetic Division	<ul style="list-style-type: none"> • Long Division of Polynomials • Synthetic Division and Remainder Theorem
	Wed, Mar 06	Review	
	Fri, Mar 08	Exam 2 (16%)	
	Mon, Mar 11	Spring Break	
	Wed, Mar 13	Spring Break	
	Fri, Mar 15	Spring Break	
9	Mon, Mar 18	Polynomial Functions and Their Graphs	<ul style="list-style-type: none"> • End Behavior of Polynomial Functions • Local Behavior of Polynomial Functions • Write and Graph Polynomial Functions
	Wed, Mar 20	Roots of Polynomials	<ul style="list-style-type: none"> • Rational Zeros of Polynomial Functions • Complex Zeros of Polynomial Functions
	Fri, Mar 22	Rational Functions and Their Graphs	<ul style="list-style-type: none"> • Asymptotic Behavior of Rational Functions • Graphs and Applications of Rational Functions
10	Mon, Mar 25	TBA	
	Wed, Mar 27	Polynomial and Rational Inequalities	<ul style="list-style-type: none"> • Rational and Quadratic Inequalities
	Fri, Mar 29	Exponential and Logarithmic Functions	<ul style="list-style-type: none"> • Evaluate and Write Exponential Functions • Applications of Exponential Functions and Base e • Exponential Function Graphs • Relate Logarithms and Exponents • Evaluate Logarithmic Expressions • Logarithmic Function Graphs
11	Mon, Apr 01	Properties of Logarithms	<ul style="list-style-type: none"> • Basic Properties of Logarithms • Rewrite Logarithmic Expressions Using Properties
	Wed, Apr 03	TBA	
	Fri, Apr 05	Exponential & Logarithmic Equations	<ul style="list-style-type: none"> • Solve Exponential Equations • Solve Logarithmic Equations
12	Mon, Apr 08	TBA	
	Wed, Apr 10	Review	
	Fri, Apr 12	Exam 3 (16%)	

13	Mon, Apr 15	Solving 2x2 and 3x3 Systems of Equations	<ul style="list-style-type: none"> • Graphing Systems of Linear Equations • Solving Systems of Linear Equations • Applications of Systems of Linear Equations • Systems of Linear Equations in Three Variables
	Wed, Apr 17	Nonlinear Systems and Systems of Inequalities	<ul style="list-style-type: none"> • Systems of Two Nonlinear Equations • Linear Inequalities in Two Variables • Graphing Nonlinear Inequalities and Systems of Inequalities
	Fri, Apr 19	Matrix Solutions to Systems	<ul style="list-style-type: none"> • Introduction to Matrices • Matrix Multiplication • Solving Systems with Gaussian Eliminations
14	Mon, Apr 22	Easter Break	
	Wed, Apr 24	Determinants & Cramer's Rule	<ul style="list-style-type: none"> • Finding Determinants of Matrices • Inverse and Identity Matrices • Solving Systems with Inverses • Solving Systems with Cramer's Rule
	Fri, Apr 26	Review	
15	Mon, Apr 29	Exam 4 (16%)	
	Wed, May 01	[8.5] The Binomial Theorem	<ul style="list-style-type: none"> • The Addition and Multiplication Principles • Permutations • Combinations • Binomial Expansion
	Fri, May 03	Review	
16	Mon, May 06	Final Exam (16%)	

Note: This is a tentative calendar, meaning that topics and associated assignments may be edited as deemed necessary by the instructor. Announcements of changes and adjustments will be made during class and posted on Blackboard.