

MATH 0320 (3:3:1)

Intermediate Algebra

MATH 1314 (3:3:1)

College Algebra

MATHEMATICS DEPARTMENT

Division of Arts & Sciences

South Plains College
Reese Center

Spring 2018

Jacque Fowler & Traci Sanders

Spring 2018
Intermediate Algebra: Math 0320.201
College Algebra: Math 1314.201

Classroom: RC 220

Time: MTWR 8:30 – 10:15 am

Instructors	Jacque Fowler	Traci Sanders
E-mail	jfowler@southplainscollege.edu	tsanders@southplainscollege.edu
Phone	716-4640	716-4616
Office	RC 223-E	RC 223-C

Fowler Office Hours:

Monday	Tuesday	Wednesday	Thursday	Friday
8:00 – 8:30 10:15 – 11:00	8:00 – 11:00			

Sanders Office Hours:

Monday	Tuesday	Wednesday	Thursday	Friday
10:15 – 12:15	10:15 – 11:15	10:15 – 11:15	10:15 – 11:15	9:00 – 12:00

Course Description: The Intermediate Algebra (Math 0320) portion of the course will include the study of relations and functions, inequalities, algebraic expressions and equations (absolute value, polynomial, radical, rational), with a special emphasis on linear and quadratic expressions and equations. The College Algebra (Math 1314) portion of the course will include in-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions and systems of equations using matrices.

Text: No textbook is required.

Supplies: notebook paper (to be turned in without spiral edges), scientific or graphing calculator (cell phones, TI-89, TI-92, TI-Nspire calculators, or other electronic devices will not be allowed during testing), pencils, graph paper, straightedge

Grading Policy: Grades will be averaged according to the following percentages:

Lab Average	10%
Test Average	70%
Final Exam	20%

Grading Scale:

- A: 90 and above
- B: 80 – 89
- C: 70 – 79
- D: 60 – 69
- F: 59 or below

Tests: There will be 7 tests and a final exam. Test 3 and the final will be comprehensive. There will be **NO MAKEUP TESTS!** Dates are listed for all tests, including the final exam, so **PLAN AHEAD!**

Homework: Homework will be assigned for all of the sections covered in the course. It will be due on test days. For each completed homework assignment, one point will be added to that test grade. Time will be given during class to answer questions on the homework.

Labs: Excluding test days, approximately the last 30 minutes of class will be our lab time. The lowest five lab grades will be dropped. **THERE ARE NO MAKEUP LABS!** Here are the two different types of labs we will have:

1. Work on homework. As long as you participate, you will receive a 100 for these labs. If you are absent, you will receive a zero.
2. Work a few problems to be turned in for a grade. If you are absent, you will receive a zero.

Attendance: Attendance and effort are the most important activities for success in this course. Whenever you have 4 consecutive or 6 total absences, the instructors may withdraw you from the course with a grade of X or F. We do not distinguish between excused and unexcused absences. If you stop attending class, you should go through the procedure for dropping a course to obtain a grade of W. For more detail, see p. 19 of the South Plains College General Catalog. Perfect attendance will result in 4 points added to your final grade. If you must miss, find out what the homework assignment was and stay caught up!

Important Dates:	February 19	Registration Opens for Summer
	March 12 – 16	Spring Break
	April 2	Easter Holiday
	April 16	Registration Opens for Fall
	April 26	Last Day to Drop
	May 7	Final Exam: 8:00 – 10:00 am

Course Outcomes:

MATH 0320

Upon successful completion of this course, students will:

1. Define, represent, and perform operations on real and complex numbers.
2. Recognize, understand, and analyze features of a linear equation and a function.
3. Recognize and use algebraic (field) properties, concepts, procedures (including factoring), and algorithms to combine, transform, and evaluate absolute value, polynomial, rational, and radical expressions.
4. Identify and solve absolute value, polynomial, rational, and radical equations.
5. Identify and solve absolute value and linear inequalities.
6. Model, interpret, justify mathematical ideas and concepts using multiple representations.
7. Connect and use multiple strands of mathematical situations and problems, as well as in the study of other disciplines.

MATH 1314

Upon successful completion of this course, students will:

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.

Core Objectives:

Communication Skills

- 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

- 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

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

Academic Integrity: The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a serious offense and renders the offender liable to serious consequences, possibly suspension. For more detail, see p. 21 of the South Plains College General Catalog.

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 Statement: In this class, the teachers 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.

Disability 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. For more information, call or visit the Disability Services Office at, Reese Center Building 8, 806-716-4675.

Sexual Misconduct: As faculty members, we are deeply invested in the well-being of each student we teach. We are here to assist you with your work in this course. If you come to us with other non-course-related concerns, we will do our best to help. It is important for you to know that all faculty members are mandated reporters of any

incidents of sexual misconduct. That means that we cannot keep information about sexual misconduct confidential if you share that information with us. Dr. Lynne Cleavinger, the Director of Health & Wellness, can advise you confidentially as can any counselor in the Health & Wellness Center. They can also help you access other resources on campus and in the local community. You can reach Dr. Cleavinger at 716-2563 or lclevinger@southplainscollege.edu or go by the Health and Wellness Center. You can schedule an appointment with a counselor by calling 716-2529.

Campus Concealed Carry Statement: South Plains College permits the lawful carry of concealed handguns in accordance with Texas state law, and Texas Senate Bill 11. Individuals possessing a valid License to Carry permit, or the formerly issued Concealed Handgun License, may carry a concealed handgun at all campus locations except for the following: natatorium. For a complete list of campus carry exclusions zones by event, please visit <http://www.southplainscollege.edu/campuscarry.php>

Course Outline

This is a tentative schedule.

Any changes will be announced in class and posted in Blackboard.

Week	Dates	Day	Topic	Assignment
1	Jan 15	Monday	Holiday	Section
	Jan 16	Tuesday	Syllabus, Solve Linear and Absolute Value Equations	1.1
	Jan 17	Wednesday	Solve Linear and Absolute Value Inequalities	1.2
	Jan 18	Thursday	Polynomials: Exponent Rules	1.3
2	Jan 22	Monday	Factor GCF and trinomials with $a = 1$	1.4
	Jan 23	Tuesday	Factor trinomials with $a > 1$, grouping, and special products	1.5
	Jan 24	Wednesday	Summary of Factoring / Solve Quadratics by Factoring	1.6
	Jan 25	Thursday	Review 1	
3	Jan 29	Monday	EXAM 1	
	Jan 30	Tuesday	Multiply and Divide Rational Expressions	2.1
	Jan 31	Wednesday	Find LCD and Form Equivalent Expressions	2.2
	Feb 1	Thursday	Add and Subtract Rational Expressions	2.3
4	Feb 5	Monday	Solve Rational Equations	2.4
	Feb 6	Tuesday	Review 2	
	Feb 7	Wednesday	EXAM 2	
	Feb 8	Thursday	Add, Subtract, & Multiply Complex Numbers	3.1
5	Feb 12	Monday	Simplify Radicals / Rational Exponents	3.2
	Feb 13	Tuesday	Add, Subtract, & Multiply Radicals	3.3
	Feb 14	Wednesday	Rationalize Radical Expressions	3.4
	Feb 15	Thursday	Solve Radical Equations	3.5
6	Feb 19	Monday	Review 3	
	Feb 20	Tuesday	EXAM 3	
	Feb 21	Wednesday	Solve Quadratics by Factoring and the Square Root Property	4.1
	Feb 22	Thursday	Solve Quadratics by Completing the Square and Quadratic Formula	4.2
7	Feb 26	Monday	Graph Quadratics	4.3
	Feb 27	Tuesday	Distance, Midpoint, Circles Part 1	4.4
	Feb 28	Wednesday	Circles Part 2	4.5
	Feb 29	Thursday	Review 4	

8	Mar 5	Monday	EXAM 4	
	Mar 6	Tuesday	Basics of Functions, Evaluate Functions	5.1
	Mar 7	Wednesday	Graph Functions, Analyze Graphs	5.2
	Mar 8	Thursday	Functions: Operations and Composition	5.3
9	Mar 12	Monday	<i>Spring Break</i>	
	Mar 13	Tuesday	<i>Spring Break</i>	
	Mar 14	Wednesday	<i>Spring Break</i>	
	Mar 15	Thursday	<i>Spring Break</i>	
10	Mar 19	Monday	Functions: Compositions and Inverses	5.4
	Mar 20	Tuesday	Functions: Slope and Graphing	5.5
	Mar 21	Wednesday	Functions: Equations, Parallel and Perpendicular Lines	5.6
	Mar 22	Thursday	Systems of Inequalities	5.7
11	Mar 26	Monday	Review 5	
	Mar 27	Tuesday	EXAM 5	
	Mar 28	Wednesday	Synthetic Division, Solve Polynomial Equations	6.1
	Mar 29	Thursday	Graph Polynomial Functions	6.2
12	April 2	Monday	<i>Holiday</i>	
	April 3	Tuesday	Graph Rational Functions	6.3
	April 4	Wednesday	Solve Polynomial and Rational Inequalities	6.4
	April 5	Thursday	Review 6	
13	April 9	Monday	EXAM 6	
	April 10	Tuesday	Exponential and Log Functions: Basics and Evaluating	7.1
	April 11	Wednesday	Properties of Logs, Compound Interest	7.2
	April 12	Thursday	Solve Exponential Equations	7.3
14	April 16	Monday	Solve Log Equations	7.4

	April 17	Tuesday	Solve Systems of Equations in 2 Variables	7.5
	April 18	Wednesday	Review 7	
	April 19	Thursday	EXAM 7	
15	April 23	Monday	Solve Systems of Equations in 3 Variables	8.1
	April 24	Tuesday	Non-Linear Systems	8.2
	April 25	Wednesday	Matrices	8.3
	April 26	Thursday	Cramer's Rule	8.4
16	April 30	Monday	Selected Topics TBA	
	May 1	Tuesday	Selected Topics TBA	
	May 2	Wednesday	Review for Final Exam	
	May 3	Thursday	Review for Final Exam	
17	<i>Monday, May 7</i> <i>Final Exam 8:00 - 10:00 am</i>			