South Plains College Common Course Syllabus: MATH 0314/1314 Revised August 2020

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 0314/1314

Course Title: College Algebra with Support

Available Formats: conventional/flex, internet, and ITV

Campuses: Levelland, Reese, Plainview, Lubbock Center, and Dual Credit

Course Description (Math 0314): Math 0314 is to be taken concurrently with MATH 1314. Background topics which are necessary for a student to successfully complete MATH 1314 will be covered, with an emphasis on fractions, factoring polynomials, functions, exponents, and operating with radical and rational expressions.

Course Description (Math1314): In-depth study and applications of polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices. Additional topics such as sequences, series, probability, and conics may be included.

Prerequisite: Minimum score of 340 on the TSIA, or a successful completion with a grade of 'C' or better in MATH 0315.

Credit (Math 0314): 3 Lecture: 3 Lab: 1 Credit (Math 1314): 3 Lecture: 3 Lab: 1

Textbook: College Algebra with Intermediate Algebra: A Blended Course, Beecher, Penna, Johnson, and Bittinger, 2018, 1st Edition, Prentice Hall/Pearson Education

Supplies: Please see the instructor's course information sheet for specific supplies.

This course partially satisfies a Core Curriculum Requirement: Mathematics Foundational Component Area (020)

Core Curriculum Objectives addressed:

- Communications skills—to include effective written, oral and visual communication
- **Critical thinking skills**—to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Empirical and quantitative competency skills**—to manipulate and analyze numerical data or observable facts resulting in informed conclusions

Student Learning Outcomes: Upon completion of this course and receiving a passing grade, the student will be able to:

- 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.

Student Learning Outcomes Assessment: A pre- and post-test questions will be used to determine the extent of improvement that the students have gained during the semester

Course Evaluation: There will be departmental final exam questions given by all instructors.

Attendance/Student Engagement Policy: Attendance and effort are the most important activities for success in this course. The instructor maintains records of the student's engagement throughout the semester. The student will be allowed to miss twenty percent (20%) of class assignments for the semester, *for any reason*. Should this number be exceeded, the instructor has the right to drop the student with a grade of F or an X, depending on the instructor's discretion.

Plagiarism violations include, but are not limited to, the following:

- 1. Turning in a paper that has been purchased, borrowed, or downloaded from another student, an online term paper site, or a mail order term paper mill;
- 2. Cutting and pasting together information from books, articles, other papers, or online sites without providing proper documentation;
- 3. Using direct quotations (three or more words) from a source without showing them to be direct quotations and citing them; or
- 4. Missing in-text citations.

Cheating violations include, but are not limited to, the following:

- 1. Obtaining an examination by stealing or collusion;
- 2. Discovering the content of an examination before it is given;
- 3. Using an unauthorized source of information (notes, textbook, text messaging, internet, apps) during an examination, quiz, or homework assignment;
- 4. Entering an office or building to obtain an unfair advantage;
- 5. Taking an examination for another;
- 6. Altering grade records;
- 7. Copying another's work during an examination or on a homework assignment;
- 8. Rewriting another student's work in Peer Editing so that the writing is no longer the original student's:
- 9. Taking pictures of a test, test answers, or someone else's paper.

COVID Syllabus Statement: Should be provided by the Vice-President of Student Services over email.

Student Code of Conduct Policy: Any successful learning experience requires mutual respect on the part of the student and the instructor. Neither instructor nor student should be subject to others' behavior that is rude, disruptive, intimidating, aggressive, or demeaning. Student conduct that disrupts the learning process or is deemed disrespectful or threatening shall not be tolerated and may lead to disciplinary action and/or removal from 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.

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 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.

Nondiscrimination Policy: 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 <u>activate</u> 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 the Director of Health and Wellness at 806-716-2362 or <u>email cgilster@southplainscollege.edu</u> for assistance.

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 and Frequently Asked Questions, please refer to the Campus Carry page at: http://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.

SPC Bookstore Price Match Guarantee Policy: If you find a lower price on a textbook, the South Plains College bookstore will match that price. The difference will be given to the student on a bookstore gift certificate! The gift certificate can be spent on anything in the store.

If students have already purchased textbooks and then find a better price later, the South Plains College bookstore will price match through the first week of the semester. The student must have a copy of the receipt and the book has to be in stock at the competition at the time

of the price match.

The South Plains College bookstore will happily price match BN.com & books on Amazon noted as *ships from and sold by Amazon.com*. Online marketplaces such as *Other Sellers* on Amazon, Amazon's Warehouse Deals, *fulfilled by* Amazon, BN.com Marketplace, and peer-to-peer pricing are not eligible. They will price match the exact textbook, in the same edition and format, including all accompanying materials, like workbooks and CDs.

A textbook is only eligible for price match if it is in stock on a competitor's website at time of the price match request. Additional membership discounts and offers cannot be applied to the student's refund.

Price matching is only available on in-store purchases. Digital books, access codes sold via publisher sites, rentals and special orders are not eligible. Only one price match per title per customer is allowed.

Note: The instructor reserves the right to modify the course syllabus and policies, as well as notify students of any changes, at any point during the semester.

South Plains College Instructor Syllabus: MATH 0314 / 1314 Fall 2020

Course Title: College Algebra with Support

Section Number: C002

Section Meeting Time and Location: T/Th 2:30 PM – 4:15 PM, M128

Format: conventional/flex

Instructor: Jerod Clopton **Telephone:** (806) 716-2738

Office: Math and Engineering building, office 102

Email: The instructor may be emailed through Blackboard or at

jclopton@southplainscollege.edu

Virtual/Face-to-Face Office Hours:

Monday: 10:30 am–12:00 pm

Tuesday: 9:30 am-10:30 am, 1:00 pm-2:00 pm

Wednesday: 10:30 am–12:00 pm

• Thursday: 9:30 am-10:30 am, 1:00 pm-2:00 pm

• Fridays: 10:30 am-11:30 am

• And by appointment (scheduled in Blackboard on by email correspondence).

Dedicated Office Hours for College Algebra Support: Due to the COVID pandemic, many courses are experiencing limited classroom occupancy and possibly reduced face-to-face classroom meetings. This section of Math 0314/1314 is experiencing both. Typically this class would meet four days a week, with all students being able to attend all class meetings. This semester, this class will only meet two days a week with limited class room occupancy. To accommodate the support side of this course I, the instructor, will hold dedicated office hours to students of the section of this course during the following times during the week:

• Monday: 2:00 pm-4:00 pm

Wednesday: 2:00 pm-4:00 pm

Limited Classroom Occupancy: Due to the COVID pandemic each class room has a limited occupancy. Therefore due to class size and limited occupancy a portion of the students will be able to attend class in a face-to-face setting while the remaining proportion will attend class virtually (by participating in the class through Collaborate or Zoom). To ensure that all students have an equal opportunity to attend face-to-face, a schedule will be created so that students who attend a class face-to-face on one day of the week will attend class virtually on the other day of the week.

Email Policy: All students at South Plains College are assigned a standardized SPC e-mail account. Although personal email addresses will continue to be collected, the assigned SPC e-mail account will be used as the official channel of communication for South Plains College. The Student Correspondence Policy can be found at www.southplainscollege.edu. To access the SPC student e-mail account, log in to portal.office.com. (Copied from SPC Student Guide)

Since all students have an assigned SPC email, the instructor will only acknowledge, respond, and send emails to your assigned SPC email. This ensures all correspondence from the instructor is received by the intended recipient.

Textbook: A textbook is not required for this section of college algebra. Though the instructor may make reference to any of the follow textbooks:

- Beecher, J. A., Penna, J. A., Johnson, B. L., & Bittinger, M. L. (2016). College Algebra with Intermediate Algebra: A Blended Course (1st ed.). Pearson. ISBN 978-0-134-55596-6.
- Blitzer, R. F. (2017). *College Algebra (7th Edition)* (7th ed.). Pearson. ISBN 978-0-134-46916-4.
- Abramson, Jay (2017). College Algebra. OpenStax.
 - The free online version of this textbook can be accessed at https://openstax.org/details/books/college-algebra

Supplies: Along with writing utensils and lined notebook paper, you will need a scientific calculator and a small supply of graph paper. Calculators on cell phones, TI-89, TI-92, or TI-Inspire calculators, or any other electronic devices will <u>not</u> be allowed during testing without permission from the instructor. Make certain you have access to a scanner or scanning app such as CamScanner, Scannable, OneDrive, etc. in order to scan your assignments/quizzes and submit them through Blackboard.

Blackboard: Blackboard is the online course management system that will be utilized for this course. This course is supplemented online, so all access to course information and your instructor is through the Internet. This course syllabus, as well as <u>all</u> course materials can be accessed through Blackboard. Login at https://southplainscollege.blackboard.com/. The username and password should be the same as the MySPC and SPC email.

Username: 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 may be emailed to <u>blackboard@southplainscollege.edu</u> or by telephone to 806-716-2180

Course Evaluation: Assignments will count for 20% of the final grade, while exams count for 80% of the final grade. Expect 28 assignments, corresponding quizzes, and 4 scheduled exams throughout the course. 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%).

- Assignments/Quizzes (28 assignments and 14 quizzes) = 20%
- Exam 1 (covering Assignments 1-7) = 15%
- Exam 2 (covering Assignments 8-13) = 15%
- Exam 3 (covering Assignments 14-21) = 15%
- Exam 4 (covering Assignments 22-26) = 15%.
- Final Exam (covering major topics from previous exams) = 20%

To maximize your potential for successfully completing this course:

login to Blackboard daily

- watch the lecture videos and take notes on them
- thoroughly complete and submit the assignments on time
- practice the exercises repeatedly until you have full mastery of them;

Amendment to Attendance/Student Engagement Policy: In addition to the attendance/student engagement policy stated in the common course syllabus (page 2), students should observe the following guidelines

Before arriving for the class meeting, make certain you have:

- 1. worked through the notes and videos for that week's lessons;
- 2. completed a majority of the assigned exercises.

Upon arriving at the class meeting, we will:

- 1. answer questions over exercises;
- 2. work through lab exercises;
- 3. submit assignments and quizzes.

Assignments and Exams: The following is a sequential list of the assignments and exams.

- 1. Linear Equations
- 2. Rational Equations
- 3. Linear Applications
- 4. Complex Numbers
- 5. Quadratic Equations
- 6. Other Types of Equations
- 7. Linear and Absolute Value Inequalities

Exam 1 (20%)

- 8. Functions and Their Graphs
- 9. Linear Functions and Slope
- 10. Distance, Midpoint, and Circles
- 11. Combinations and Compositions of Functions
- 12. Inverse Functions
- 13. Quadratic Functions and Synthetic Division

Exam 2 (20%)

- 14. Roots of Polynomials
- 15. Polynomial Functions and Their Graphs
- 16. Rational Functions and Their Graphs
- 17. Polynomial and Rational Inequalities
- 18. Exponential and Logarithmic Functions
- 19. Properties of Logarithms
- 20. Exponential Equations
- 21. Logarithmic Equations

Exam 3 (20%)

- 22. 2x2 and 3x3 Linear Systems
- 23. Matrix Solutions to Systems
- 24. Partial Fractions
- 25. Nonlinear Systems and Systems of Inequalities
- 26. Determinants and Cramer's Rule

Exam 4 (20%)

27. The Binomial Theorem

28. Arithmetic sequences, Geometric Sequences, and Series Final Exam (20%)

Assignment Format and Policy: Assignments are given after each lesson and are collected according to the calendar below. Expect to have a quiz at most twice per week. For each question on each assignment:

- Write the question number.
- In solving the problem, show <u>all</u> necessary work.
- Clearly mark your answer.
- Check your answers in Blackboard to make certain you are practicing the exercises correctly.
- Write your name at the top of each page of your work.
- Submit the assignment in Blackboard as a single pdf file. (Pdf files can be generated easily using a scanner or many freely available phone apps, like CamScanner, Scannable, or OneDrive.)

Late assignments will be accepted with a 10% deduction. No late quizzes will be accepted. Make certain to complete and submit assignments on time (or early). Early submissions are welcomed! Again, expect a quiz to be administered with each assignment collection.

Exam Format and Policy: There are four (4) units of study in this course. At the conclusion of each unit is a face-to-face examination, through the ITV system, on the specified exam day stated on the tentative course calendar. If there becomes a quarantine issue or movement of this class to an online setting, then adequate internet supplies will be needed, such as a webcam, microphone, and access to online collaborative tools like Blackboard Collaborate or Zoom.

Tentative Course Calendar: Below is a calendar view of assignment and exam due dates and times.

Week	Date	Topics (assignment is included with each lesson)	Due Date
1	Aug 25	Introduction	Quiz 0 due by 11:59 pm, Tue, Aug 25.
	Aug 27	Asgmt 1 – Linear Equations	Asgmt 1 and Quiz 1 due by 11:59 pm, Thu, Aug 27.
2	Sep 1	Asgmt 2 – Rational Equations	Asgmt 2 due by 11:59 pm, Tue, Sep 1.
	Sep 3	Asgmt 3 – Linear Applications	Asgmt 3 and Quiz 2 due by 11:59 pm, Thu, Sep 3.
3	Sep 8	Asgmt 4 – Complex Numbers	Asgmt 4 due by 11:59 pm, Tue, Sep 8.
	Sep 10	Asgmt 5 – Quadratic Equations and Synthetic Division	Asgmt 5 and Quiz 3 due by 11:59 pm, Thu, Sep 10.
4	Sep 15	Asgmt 6 – Other Types of Equations	Asgmt 6 and Quiz 4 due by 11:59 pm, Tue, Sep 15.
	Sep 17	Asgmt 7 – Linear and Absolute Value Inequalities	Asgmt 7 by 11:59 pm, Thu, Sep 17.
		Exam 1	Exam 1 due by 11:59 pm, Sun, Sep 20.

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5	Sep 22	Asgmt 8 – Functions and Their Graphs	Asgmt 8 due by 11:59 pm, Tue, Sep 22
	Sep 24	Asgmt 9 – Linear Functions and Slope	Asgmt 9 and Quiz 5 due by 11:59 pm, Thu, Sep 24
6	Sep 29	Asgmt 10 – Distance, Midpoint, and	Asgmt 10 due by 11:59
O	36p 23	Circles	pm, Tue, Sep 29
	Oct 1	Asgmt 11 – Combination and	Asgmt 11 and Quiz 6 due
	000	Composition of Functions	by 11:59 pm, Thu, Oct 1
7	Oct 6	Asgmt 12 – Inverse Functions	Asgmt 12 and Quiz 7 due
			by 11:59 pm, Tue, Oct 6
	Oct 8	Asgmt 13 – Quadratic Functions and	Asgmt 13 and by 11:59
		Synthetic Division	pm, Thu, Oct 8
		Exam 2	Exam 2 due by 11:59 pm, Sun, Oct 11.
8	Oct 13	Asgmt 14 – Roots of Polynomials	Asgmt 14 due by 11:59
			pm, Tue, Oct 13
	Oct 15	Asgmt 15 – Polynomial Functions and	Asgmt 15 and Quiz 8 due
		Their Graphs	by 11:59 pm, Thu, Sep 24
9	Oct 20	Asgmt 16 – Rational Functions and	Asgmt 16 due by 11:59
		Their Graphs	pm, Tue, Oct 20
	Oct 22	Asgmt 17 – Polynomial and Rational	Asgmt 17 and Quiz 9 due
		Inequalities	by 11:59 pm, Thu, Oct 22
10	Oct 27	Asgmt 18 – Exponential and	Asgmt 18 due by 11:59
	0.100	Logarithmic Functions	pm, Tue, Oct 27
	Oct 29	Asgmt 19 – Properties of Logarithms	Asgmt 19 and Quiz 10
			due by 11:59 pm, Thu, Oct 29
11	Nov 3	Asgmt 20 – Exponential Equations	Asgmt 20 and Quiz 11
			due by 11:59 pm, Tue, Nov 3
	Nov 5	Asgmt 21 – Logarithmic Equations	Asgmt 21 due by 11:59 pm, Thu, Nov 5
		Exam 3	Exam 3 due by 11:59
			pm, Sun, Nov 8.
12	Nov 10	Asgmt 22 – 2x2 and 3x3 Systems of Equations	Asgmt 22 due by 11:59 pm, Tue, Nov 10
	Nov 12	Asgmt 23 – Matrix Solutions to Systems	Asgmt 23 and Quiz 12
	1.101.12	, logint 20 main collaione to cyclome	due by 11:59 pm, Thu,
			Nov 12
13	Nov 17	Asgmt 26 – Determinant's and Cramer's	Asgmt 26 and Quiz 13
-		Rule	due by 11:59 pm, Tue,
			Nov 17
	Nov 19	Asgmt 25 – Nonlinear Systems and	Asgmt 25 due by 11:59
		Systems of Inequalities	pm, Thu, Nov 19
		Exam 4	Exam 4 due by 11:59
			pm, Sun, Nov 22
14	Nov 24	Asgmt 24 – Partial Fractions	Asgmt 24 due by 11:59 pm, Tue, Nov 24
	Nov 26	Thanksgiving Break	μπ, τα ς , Νον 24
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15	Dec 1	Asgmt 27 – Binomial Theorem	Asgmt 27 and Quiz 14 due by 11:59 pm, Tue,
			Dec 1
	Dec 3	Asgmt 28 – Arithmetic Sequences,	Asgmt 28 due by 11:59
		Geometric Sequences, and Series	pm, Thu, Dec 28
16	Dec 7–10:	Final Exam – Date to be determined	
	Finals Week		