# South Plains College Common Course Syllabus: MATH 1314 Revised December 2019

**Department:** Mathematics, Engineering, and Computer Science

**Discipline:** Mathematics

Course Number: MATH 1314

Course Title: College Algebra

Available Formats: conventional, internet, and ITV

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

**Course Description:** 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 350 on the TSIA, TSI-exempt status, or a successful completion with a grade of 'C' or better in MATH 0320.

Credit: 3 Lecture: 3 Lab: 1

**Textbook:** College Algebra with Intermediate Algebra: A Blended Course, Beecher, Penna, Johnson, and Bittinger, 2018, 1<sup>st</sup> 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 Policy:** Attendance and effort are the most important activities for success in this course. Records of your attendance are maintained throughout the semester. Five (5) absences, **for any reason**, are allotted to the student for the semester. Tardies count as one-half (1/2) of an absence. Tardies will be applied for consistently being late to class, as deemed by the instructor, and leaving class early. If this number is exceeded, the instructor has the right to drop you with a grade of F or an X, depending on their 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.

**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 email cgilster@southplainscollege.edu 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: <a href="http://www.southplainscollege.edu/campuscarry.php">http://www.southplainscollege.edu/campuscarry.php</a>

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.

# MATH 1314—College Algebra South Plains College, Levelland campus Spring Semester 2020

**Sections:** 002, MW, 11:00 AM – 12:45 PM

003, MW, 1:00 - 2:45 PM

**Rooms:** Levelland MECS Bldg., Room 108

Levelland MECS Bldg., Room 126

**Instructor**: Mr. Robert E. Plant, II, M.S.

Office Info: Room—Levelland MECS Bldg., Room 116B

Phone—(806) 716-2734

Hours—the following table will display the regular office hours.

Monday	Tuesday	Wednesday	Thursday	Friday	
15:00 – 16:00	8:15 – 10:15	15:00 – 16:00	8:15 – 10:15	9:00 – 11:00	
OR BY APPOINTMENT					

**E-mail**: rplant@southplainscollege.edu

**O.P.I.\***: Lecture materials for this course will be provided by the Instructor through

Blackboard as made available; this Syllabus is @ 2020 by Mr. Robert E. Plant, II \* O.P. I. means "other pertinent information," or in layman terms, "something else

that you need to know."

**Tutoring:** Free tutoring is available in room 116 of the Mathematics-Engineering Building, at

the Reese Center campus in Rooms RC211 and RC212, and at the Lubbock Center (40<sup>th</sup> and Avenue Q). (Please remember to verbally request a tutor and to sign in when you seek the help of a tutor in each of these places.)

Videos for this course are also available. Students are encouraged to view these

by accessing them online via YouTube.

There are alternate tutoring resources available online for students upon request.

"Practice & Application Sustain Success! #PASS"

-Instructor

### **Guide to Solving Mathematical Problems**

When solving a mathematical problem, the following questions must be answered:

- Q1. What *known* information does the problem give me?
- A1. You will be shown, through examples given by the instructor, how to list the known information of the problem. Use this process unless a more suitable one is known by you. Spare no details until you have *mastered* this concept of setting up the problem. Once you have done so, then you can afford to spare some of the details.
- Q2. What information given in the problem do I not know, and how do I find it?
- A2. In this course, you will deal with problems that have unknown information which must be found. Most of these problems will have one unknown; however, there will be a few that will have two, which is the *maximum* number of unknowns that will be examined for any problem. The instructor will show you the procedures necessary for finding these unknowns.
- Q3. When is the problem solved or completed?
- A3. The problem will be solved or completed **when there is no unknown information remaining**. Each section covered in this course will have problem exercises that are designed to reinforce the concept(s) of the section, and there will be more than one problem assigned per concept (unless otherwise stated by the instructor at the time of assignment).

## **Expectations of the Student for the Instructor**

The Student is within all rights to expect that the Instructor do the following:

- Show up, as scheduled, to teach all information pertaining to the course.
- > Use the entirety of the lecture period as well as the allotted lab time for this course.
- Provide notice of any schedule changes.
- Maximize the time allotted for this course by assessing student aptitude of covered information at the close of each lecture, when time permits.
- Present the material in a manner that can generally be understood by the majority of the class.
- Be accessible to those who need assistance outside of the classroom setting, by way of e-mail or in person, during office hours or reasonably scheduled appointment times.
- Respond to all e-mails in a timely and discretionary manner
- Hold to any assignment(s) given during the course of the semester unless removed.
- Uphold the policies of the college as it pertains to the student's welfare in the course.
- Not make any exceptions regarding the dismissal of any student from the course for reasons listed herein.
- Allow each student the opportunity to discuss the material presented during the lecture period.
- Provide examinations based on the information discussed in class that contain problems which use solving methods *similar* to those assigned from sections pertaining to the exam.

## **Expectations of the Instructor for the Student**

The Instructor is within all rights to expect that the Student do the following:

- Show up, as scheduled, to receive and learn all information pertinent to the course and be mindful of any schedule changes.
- Take advantage of **all** resources available to you. These resources, which include the Office Hours and the Tutoring Lab, have been previously stated in the syllabus.
- Be respectful of your peers and the Instructor as stated in the SPC Student Handbook.
  - o In the collegiate setting, all students are considered to be adults and are expected to uphold conduct worthy of such consideration.
  - Failure to do so provides sufficient grounds for the Student to be dismissed from the course.
- ▶ Be willing to work together with—**BUT NOT DO WORK FOR**—fellow classmates.
  - Networking is an essential tool both in the workforce and in the classroom; furthermore, the greater the numbers of minds there are involved, the less mental labor is required for each individual.
  - No one is an island... except on the exams!
- > Be mindful of the classroom setting and the roles therein.
  - While student tuition is vital to the well-being of this academic institution, this does NOT warrant the concession of any instructor to you in a manner that compromises the integrity of the classroom setting and that of the institution itself.
- Write all graded work legibly and in <u>pencil only</u>. <u>All</u> work not done in pencil will not be accepted by me and will cause you to receive a grade of zero percent (0%) for the work in guestion.
- Furn all electronic devices **off** that have no use in the classroom setting.
  - o This means all music players, cellular telephones (or cell phones), etc.
  - o In the event that a cell phone must be on (family emergencies only), then the phone must be put on vibrate mode and placed on your desk.
  - o Tablets and digital notebooks during lecture are allowed.
  - o If a disallowed device is in use during an exam, then the grade for said exam will be zero percent (0%).
- Bring all materials needed for the course and refrain from bringing anything that is not needed. This allows you to pay attention to the subject matter only and shows me that you are prepared to learn.
- Obtain all missed information and assignments from a fellow classmate.
  - In the spirit of holding to all course objectives in a manner that warrants personal accountability, I will not relay such information unless absolutely necessary.
  - This means that if there is no documented reason for missing the information, then find your peers, not me.
- READ THE SYLLABUS!!!
  - If you lose the copy that I give you, then you will have to obtain another copy from Blackboard.
  - o There are *no exceptions* to this rule!

## **Required & Disallowed Materials for the Course**

The following materials are required of the Student for this course:

- Pencil—This will be required for all work that is to be graded by the Instructor
- Ruler—This will be required for the Graphing portion of this course
- Multi-subject Notebook (with at least 5 sections)—This will be required for the Student to keep his/her notes; any writing utensil may be used to take notes, and the notebook is to be used in this course only
- Three-ringed Binder—This will be required to store all Homework (HW) that is assigned in the course; should be stocked with at least 250 sheets of loose-leaf writing paper and at least 100 sheets of graphing paper, which are sold separately
- Graphing calculators—These are allowed in this course and <u>cannot exceed</u> the <u>quality of a TI-84 Calculator</u>; no extra calculators are required of the Instructor to provide in the event of the Student not having his/her own
- Syllabus Acknowledgment of Receipt—The filling in, signing, and returning of said form is prerequisite for any accommodations stated in the syllabus to be recognized for the Student; nonetheless, the Student is still expected to uphold any responsibilities that are stated herein

The following materials and situational items are disallowed in this course:

- > Cell phones—Usage of cell phones during lecture is prohibited in this course
  - o Usage during lecture may result in dismissal from lecture and a counted absence
  - Usage during an exam is grounds for immediate dismissal from the course
- Online math answering programs—Programs that provide "solutions" to unworked problems, such as Chegg, MathWay, PhotoMath, and Wolfram Alpha are strictly prohibited from use in this course
  - o First Offense—Dismissal from lecture and counted absent
  - Second Offense—Student will be dropped from the course
- TI-89 and *n*-Spire calculators—As the TI-89 can symbolically differentiate as well as integrate, the use thereof is prohibited; as the *n*-Spire calculator can save webpage information, the use thereof is prohibited; cell phone calculator usage is also disallowed; repeated violation will result in the *dismissal of the Student from the course*
- Pen for doing graded work—Use thereof in said circumstance will result in a zero percent (0%) for the assignment in question
  - All work must be shown in pencil
  - Writing each question in pen is permitted
  - Circling/boxing answers in pen/highlighter is allowed
- Notes on exams—Use thereof in said circumstance that is not permitted by the Instructor will result in the immediate dismissal of the Student from the course.
- Student Solutions Manuals during class time—Use thereof in said circumstance will result in the Student being dismissed from the classroom and being counted as absent for the day in question

If the Student has any concerns pertaining to the information above on this page, then the Student is to contact the instructor by the means stated in this document. The Instructor cannot be reasonably expected to address any such concerns if no communication is had with the Student.

## **Grading Policy\***

90% or above	Α	HW Notebook Checks (2 @ 5%):	10% of overall grade
80-89%	В	HW Quizzes (10 @ 3%):	30%
70-79%	С	Mid-term Examinations (4 @ 10%):	40%
60-69%	D	Final examination (cumulative):	20%
59% or below	F		

<sup>\*</sup>All grades are rounded from the first decimal. Borderline grades (within 2% of the minimum) will be handled by the Instructor based on the Student's compliance with the Syllabus. Upon the submission of grades at the end of the semester, **ALL GRADES ARE FINAL!** 

### **Holiday/Travel Statement**

If you the student have pre-existing plans to either travel out of the area during scheduled class times, you must inform me by **NO LATER THAN Monday**, **February 3**, **2020**. Failure to do so will result in the forfeiture of any assignments that will come into question during your dates of absence.

#### **Religious Holy Days**

In accordance with Section 51.911, Texas Education Code, South Plains College will allow a student who is absent from class for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within seven (7) calendar days after the absence. Students are required to file a written notification of absence with each instructor within the **first fifteen (15) days of the semester** in which the absence will occur. Forms for this purpose are available in the Student Services Office along with instructions and procedures. "Religious holy days" means a holy day observed by a religion whose place of worship is exempt from property taxation under Section 11.20, Tax Code. (Copied from current South Plains College Catalog)

## **Final Examination Policy**

There will be a final examination for this course. *All students are required to take this exam at the appointed time listed herein.* Also, due to the insurance of outcomes assessment at the end of any semester, there will be no guarantee of exemption from the final exam for this course. *If any exam is missed, then the final will replace ONE such exam upon notification before the exam is scheduled.* All other exams missed will receive a grade of 0% or be handled at the Instructor's discretion. If the final exam is missed by any student required to take such, the student will receive a 0% for the final and an "F" for the course!

## **Sexual Misconduct Confidentiality Statement**

As a faculty member, I am deeply invested in the well-being of each student I teach. I am here to assist you with your work in this course. If you come to me with other non-course-related concerns, I will do my best to help. It is important for you to know, however, that all faculty members are mandated reporters of any incidents of sexual misconduct. That means that I cannot keep information about sexual misconduct confidential if you share that information with me.

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 the director by phone at 716-2563 or by going to the Health & Wellness Center. You can schedule an appointment with a Counselor by calling 716-2529.

## **Key SPC Dates**

January 29<sup>th</sup> – 12<sup>th</sup> Class Day April 23<sup>rd</sup> – Last Day to Withdraw from Classes May 4<sup>th</sup>-7<sup>th</sup> – Finals Week



## The "Course Fishing" Rule

This rule has been implemented for the Fall Semester of 2007 and is effective hereafter. As per House Bill 116 (Senate Bill 1231) of the Texas legislature, *all* students will be limited to a total of six (6) mid-semester withdrawals for their entire undergraduate academic career. A mid-semester withdrawal is one that occurs after the twelfth (12<sup>th</sup>) class day and is noted on the student's transcript as a "W", and upon the student receiving the sixth W, all future attempts to withdraw from a course mid-semester will be denied. As a result, a terminal course grade (A, B, C, D, or F) will be issued for the course in question. This does not include any withdrawals acquired by the student before the Fall Semester of 2007, so the count for each student under this rule is currently zero (0). BE SURE OF YOUR INTENTIONS TO FINISH OUT THE COURSE BEFORE CONTINUING!

# MATH 1314: Spring Semester 2020 Tentative Lecture & HW Calendar

Week	Week Day 1	Week Day 2	
1 (1/13 to 1/17)	Introduction; Sets and Intervals	Functions: Domain and Characteristics	
2 (1/20 to 1/24)	MLK, Jr. Holiday	<b>HW Quiz 1;</b> Linear Equations & Models	
3 (1/27 to 1/31)	Linear Functions	<b>HW Quiz 2</b> ; Systems of Linear Equations	
4 (2/3 to 2/7)	Matrices & GJE; <u>HW Checks Begin</u>	HW Quiz 3; Determinants & Cramer's Rule	
5 (2/10 to 2/14)	Linear Inequalities	HW Quiz 4; Binomial Expansion	
6 (2/17 to 10/21)	Complex Numbers; Quadratic Equations	Exam 1 TH Issued; Quadratic Functions	
7 (2/24 to 2/28)	Exam 1 Completed; Distance Formula; Circles	Polynomials: Factoring & Division	
8 (3/2 to 3/6)	<b>HW Quiz 5</b> ; Polynomial Zeros; Polynomial Functions	Exam 2 TH Issued; Rational Equations; Rational Functions	
9 (3/9 to 3/13)	Exam 2 Completed; Polynomial & Rational Inequalities	HW Quiz 6; Composite & Inverse Functions	
10 (3/16 to 3/20)	SPRING BREAK – NO CLASSES		
11 (3/23 to 3/27)	HW Quiz 7; Exponential & Exam 3 TH Issued; Properties of Logarithmic Functions Logarithms		
12 (3/30 to 4/3)	Exam 3 Completed; Exponential & Logarithmic Equations	<b>HW Quiz 8</b> ; Radical Functions & Equations	
13 (4/6 to 4/10)	Absolute Value Equations & HW Quiz 9; Rates of Change Inequalities		
14 (4/13 to 4/17)	Easter Break	Exam 4 TH Issued; Piecewise Functions	
15 (4/20 to 4/24)	Exam 4 Completed; Function Operations	Nonlinear Systems of Equations	
16 (4/27 to 5/1)	HW Quiz 10; HW Checks End; Nonlinear Systems of Inequalities	Final Exam Summary	
17 (5/4 to 5/8)	FINAL EXAMINATION SCHEDULE  Monday, 5/4, 10:15 AM – 12:15 PM (Section 002)  Wednesday, 5/6, 10:15 AM – 12:15 PM (Section 003)  ORIGINAL CLASSROOMS		

All problems from each section will be assigned for homework unless changed by the Instructor on the day of lecture. If there is an extenuating circumstance that prevents the Student from interacting with fellow classmate, then the Instructor must be made aware within the first two weeks of class. **Personal preference does NOT qualify as an extenuating circumstance!** 

## **HW Grading Rubric**

This is the rubric that will be used for the two (2) homework (HW) notebook checks during the semester and the Instructor will hold to this rubric. Each HW notebook check will be worth **5 points**, with students **always required to have the notebook ready**. There will be 5 criteria evaluated at each check, with each criterion receiving a standard maximum of 1 point:

- 1. All problems in each section (up to the current section at that time) are attempted, or no more than 1 problem is missing for every 10 problems assigned.
  - a. 1 point if satisfied; +0.25 point if all are attempted and worked
  - b. 0.5 point if partially satisfied
  - c. 0 points if not satisfied
- 2. All work is shown for **each** problem, and the Student is using an **authorized** calculator in this course.
  - a. 1 point if satisfied; +0.25 point if **all** answers are correct with work shown
  - b. 0.5 point if at least half of the problems have work shown with answers
  - c. 0.25 point if less than half of the problems have work shown with answers
  - d. 0 points if no work is shown with answers OR an unauthorized calculator is used
- 3. HW is organized based on the lecture calendar, is kept in a 3-ringed binder as per the Syllabus, and is grouped based on the mid-term exams.
  - a. 1 point if completely satisfied; +0.15 point if a copy of the Syllabus is inside; +0.1 point if separated with tabbed sheets
  - b. 0.5 point if kept in a folder/spiral notebook OR if out of order
  - c. 0 points if not satisfied
- 4. HW is made available upon request (on time) with all work done in pencil.
  - a. 1 point if completely satisfied; +0.25 point if Acknowledgment of Receipt is submitted before Week 3
  - b. Prorated deduction for all sections not satisfied
  - c. 50% penalty on entire assignment if one class day late; 100% penalty thereafter\*
- 5. Student correctly applies the information presented in the lecture to HW.
  - a. 1 point if completely satisfied;
  - b. 0.5 point if not completely satisfied, but work is attempted for all sections
  - c. 0 points if all sections are not satisfied

<sup>\*</sup> Extenuating circumstances will be handled at the Instructor's discretion as per the Syllabus.

#### **ACKNOWLEDGMENT OF RECEIPT**

As a student in this course, I hereby acknowledge that I have received, read, and clearly understood the syllabus. Furthermore, I hold myself accountable for adhering to the expectations stated therein. I also acknowledge that it is my duty and responsibility to notify the instructor of all personal situations that affect my standing in this course before any occur. I am fully aware that any breach of said expectations and responsibilities on my part will result in any necessary consequences that the instructor has stated to me through the syllabus, and that any differences of opinion will be discussed with the instructor in a manner befitting of adults. Finally, in the event of a later dispute by me, I will refer to the syllabus and will, by my signature, forfeit any pursuit that is not backed by the syllabus.

Student's Printed Name	Date of Acknowledgment
	Roberto Plan
Student's Signature	Instructor's Signature

Monday & Wednesday Schedule		Tuesday & Thursday Schedule	
<u>Class</u>	<u>Time</u>	<u>Class</u>	<u>Time</u>