South Plains College Common Course Syllabus: MATH 1324 Revised August 2020

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 1324

Course Title: Mathematics for Business and Social Sciences

Available Formats: conventional/flex and internet

Campuses: Levelland, Reese, and Dual Credit

Course Description: The application of common algebraic functions, including polynomial, exponential, logarithmic, and rational, to problems in business, economics, and the social sciences are addressed. The applications include mathematics of finance, including simple and compound interest and annuities; systems of linear equations; matrices; linear programming; and probability, including expected value.

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: *Mathematics with Applications in the Management, Natural, and Social Sciences*, Lial, Hungerford, Holcomb, and Mullins, 2019, 12th 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. Apply elementary functions, including linear, quadratic, polynomial, rational, logarithmic, and exponential functions to solving real-world problems.
 - a. Chapter 3: Functions and Graphs (Finite Algebra)
 - b. Chapter 4: Exponential and Logarithmic Functions (Transcendental Algebra)
- 2. Solve mathematics of finance problems, including the computation of interest, annuities, and amortization of loans. (Chapter 5: Mathematics of Finance)
- 3. Apply basic matrix operations, including linear programming methods, to solve application problems.
 - a. Chapter 6: Systems of Linear Equations and Matrices
 - b. Chapter 7: Linear Programming (includes the Simplex Method)
- 4. Demonstrate fundamental probability techniques and application of those techniques, including expected value, to solve problems.
 - a. Section 8.3: Introduction to Probability
 - b. Section 8.4: Basic Concepts of Probability
 - c. Section 9.1: Probability Distributions and Expected Value
- 5. Apply matrix skills and probability analyses to model applications to solve realworld problems. (Section 9.5: Markov Chains)

[Note: Chapter 1 (Algebra and Equations) and Chapter 2 (Graphs, Lines, and Inequalities) are for *review* purposes only]

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: It is the policy of South Plains College for the Spring 2021 semester that as a condition of on-campus enrollment, all students are required to engage in safe behaviors to avoid the spread of COVID-19 in the SPC community. Such behaviors specifically include the requirement that all students properly wear CDC-compliant face coverings while in SPC buildings including in classrooms, labs, hallways, and restrooms. Failure to comply with this policy may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Dean of Students on the Levelland campus or the Dean/Director of external centers for Student Code of Conduct Violation. Students who believe they have been exposed or may be COVID-19 positive, must contact Health Services, DeEtte Edens, BSN, RN at (806) 716-2376 or dedens@southplainscollege.edu.

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.

MATH 1324—Mathematics for Business and Social Sciences South Plains College Summer Session II 2025

Section: 151, Online

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

Office Info: Phone—(806) 468-2607 (Google Voice number) Hours—Virtual Hours are 8 AM – 8 PM Monday-Thursday and 8 AM – Noon Friday; call the above number or send an e-mail

E-mail: rplant@southplainscollege.edu

O.P.I.*: This syllabus is © 2025 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: Tutoring is FREE for all currently enrolled students. Make an appointment or drop-in for help at any SPC location or online! Visit the <u>SPC Tutoring</u> <u>Webpage</u> to learn more about how to book an appointment, view the tutoring schedule, and view tutoring locations.

You also have access to FREE tutoring with Brainfuse after normal tutoring hours each week. Log into Blackboard Ultra, then look for it in the "Supplemental Links" module.

You may access Brainfuse during the following times: Monday – Thursday: 8 PM to 8 AM (next day) OR 6 PM Friday evening to 8 AM Monday morning

For questions regarding tutoring, please email <u>SPC Tutoring</u> or call 806-716-2538.

"You must go through TSA to pass: Think, Speak, and Act accordingly..."

—Instructor

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, and mutually agreed upon, to teach all information pertaining to the course.
- Use the entirety of the lecture period, physical or virtual, 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 when time permits.
- Present the material in a manner that can generally be understood by the class at large.
- 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 contact attempts in a timely and discretionary manner.
- > Hold to any assignment(s) given over the Session 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 *like* 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, and mutually agreed upon, 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.
 - In the collegiate setting, all students are considered adults and are expected to uphold conduct worthy of such consideration.
 - Failure to do so provides enough grounds for the Student to be dismissed from the course.
- Be willing to work 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 everyone.

- Virtual networking will very much be a necessity. Use Skype, Teams, or other virtual conferencing interfaces to interact with each other (when permitted).
- 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. <u>All</u> work not understood by me will not be accepted by me and will cause you to receive a grade of zero percent (0%) for the work in question.
- Turn all electronic devices off that have no use in the face-to-face classroom setting.
 - This means all music players, cellular telephones (or cell phones), etc.
 - o If a cell phone must be on (family emergencies only), then
 - the Instructor must be notified *before* the beginning of the period and
 - the phone must be put on vibrate mode and placed screen down on your desk.
 - Tablets and digital notebooks during face-to-face lecture are permitted.
 - 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 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.
 - There are *no exceptions* to this rule!

Required & Disallowed Materials for the Course

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

- > Writing Utensil—This will be required for all work that is to be graded by the Instructor
 - Pencil is *strongly recommended*
 - Work that is deemed to be illegible will not be graded
 - Label all assignments by Section and Lecture Date
 - Label all problems Exercise Number
- Ruler—This will be required for the Graphing portion of this course
- Multi-subject Notebook (with at least 5 sections)—This is highly recommended 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*
- Web Camera—This is required for the quizzes and exams, which will be proctored electronically (via Honorlock)
- Graphing calculators—These are allowed in this course and <u>cannot exceed the quality of a TI-84 or Casio fx-9750GIII 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, scanning, and submitting 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
- Cell phone scanning app—These will be used to scan your written work and to save it as a single PDF file; apps include the Phone's Notes app, OneDrive (need SPC email and password), Genius Scan, CamScanner, and Evernote (Scannable [for Apple] or "for Android")

The following materials and situational items are disallowed in this 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
 - First Offense—50% penalty on assignment
 - Second Offense—Student may be dropped from the course
- High-level Graphing calculators—TI-89 (or higher) and Casio FX-CG Series; cell phone calculator usage is also disallowed; repeated violation will result in the dismissal of the Student from the course
- ChatGPT and other AI Programs—Remember to go through TSA
- 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.

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
 A

 80-89%
 B

 70-79%
 C

 60-69%
 D

 59% or below
 F

Quizzes: Midterm Exams: Final Exam: 4 @ 5% each (20%) 3 @ 20% each (60%) 1 @ 20%

* All grades are rounded from the first decimal. Upon the submission of grades at the end of the session, **ALL GRADES ARE FINAL!**

Assignment Breakdown

Homework and Notes—Students are advised to use notes and/or videos to do the homework; homework and *written* notes are allowed for Quizzes, but not for Exams **Quizzes**—Students will be assessed periodically over the lecture material; these will be proctored *virtually* using Honorlock and scanned upon completion; *written* notes and homework exercises will be allowed for use (90-minute duration; due at 11:30 PM) **Midterm Examinations**—Students will be assessed over each unit upon the calendar-determined completion thereof; these will be proctored *virtually* using Honorlock and scanned upon completion; *monotes or exercises will be allowed, and cell phones must be put face down on the writing surface* (180-minute duration; due at 11:30 PM) **Final Exam**—Students will be given a comprehensive Final Exam (180-minute duration) at the end of the Session, which will be proctored *via Honorlock* (see Calendar)

Holiday/Travel Statement

If you must travel and are unable to meet the deadlines for Quizzes and Exams, you are advised to withdraw from the course ASAP.

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 week of the Session** 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)

Proctored Assessment Policy

- If the Student has a **detached webcam**, which is built separately from the proctoring device (laptop/notebook/desktop), then the Student should remember this motto: "Face and space keep grades in place." This means that if I can see **both** the face and workspace of the Student to verify academic integrity, then all will be well with the grading of each Assessment.
- If the Student has an **integrated (built-in) webcam**, then the Student must do the following **before** the Assessment is started: 1) show his/her calculator in the writing hand, then set it down, 2)show his/her phone in the writing hand, 3) place said phone **behind** the proctoring device, which must be placed at an angle and on the opposite side of the writing hand, 4) show the non-writing hand, empty, next to the face in the camera, and 5) place the non-writing hand on the desk and in front of the proctoring device.
- Once the Student has started the Assessment, the proctoring device can neither be adjusted nor obstructed; also, the Student cannot reach behind the proctoring device, and the Student must show his/her hands if not writing or scrolling on the proctoring device.
- Each Assessment must be completed in one sitting. This means that once the Assessment is started, it must be finished.
- The proctored session must last the duration of the Student's active completion of the Assessment.
- Written work must be turned in 20 minutes after the completion of each Assessment.
- Any Student who fails to comply with the requirements stated above will be suspected of academic dishonesty and will be penalized **no less than 25%** of the Assessment's stated value. A negative flag rate of 81% or higher on Honor will automatically warrant the minimum deduction.

Course Withdrawal Policy

If the Student wishes to withdraw from this class for any reason, then the Student will need to send an email to <u>registrar@southplainscollege.edu</u> from his/her <u>SPC email</u> [Email Format, no spaces between: (first initial + last name + last 4 digits of Student ID)@southplainscollege.edu] with the following information:

- 1. Full Name
- 2. Birthdate
- 3. Student ID
- 4. If they are Dropping or Withdrawing
- 5. Course(s)
- 6. Reason for dropping the course.

Dual-credit Students are encouraged to ask the Facilitator or Counselor for their Student ID (if not known); also, the Password will be the PIN received in the Welcome Letter (if unchanged).

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

July 6 – Last Day, 100% Refund July 7 – First Day of Class July 10 – 4th Class Day July 11 – Roster Certification July 30 – Last Day to Withdraw from Classes August 7 – Final Exam

Mr. Robert E. Plant, II Summer II 2025 Deadline Calendar

Week (Dates)	Day 1	Day 2	Day 3	Day 4	Days 5-7
0 (6/30 to 7/4)			Payment Due	Blackboard Opens; Practice Exam	Last Chance: 100% Refund
1 (7/7 to 7/11)	1-Variable Linear Inequalities	Graphs and Equations of Lines	Linear Functions with Business Applications	Linear Systems of Equations	Quiz 1 open
2 (7/14 to 7/18)	Quiz 1 due Matrix Methods: GJE	Quiz 2 open Matrix Multiplication	Linear Programming I	Quiz 2 due Linear Programming II	Exam 1 open (Linear and Matrix Applications)
3 (7/21 to 7/25)	Exam 1 due Linear Programming III	Quiz 3 open Probability & Markov Chains	Quadratic Functions	Quiz 3 due Polynomial Functions	Exam 2 open (Programming & Markov Chains)
4 (7/28 to 8/1)	Exam 2 due Rational Functions	Quiz 4 open Functions: [e ^x and ln(<i>x</i>)]	Function Applications, [e ^x and ln(x)]	Quiz 4 due Simple & Compound	Exam 3 open (Algebraic Functions)
5 (8/4 to 8/8)	Exam 3 due Ordinary Annuities: Future Value	Ordinary Annuities: Present Value	Opens (Applications	Final Exam due by 11 PM; COURSE ENDS	

> The homework will be the *required* problems from each section.

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

Roberts Plan

Student's Signature

Instructor's Signature

Monday & Wednes	day Schedule	Tuesday & Thursday Schedule		
<u>Class</u>	<u>Time</u>	<u>Class</u>	<u>Time</u>	

Scan and submit to "Acknowledgment of Receipt Upload" on **Blackboard**.