

South Plains College
Common Course Syllabus: MATH 0324/1324
Revised August 2020

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

Course Number: MATH 0324/1324

0324 Course Title: Mathematics for Business and Social Sciences Support Course

1324 Course Title: Mathematics for Business and Social Sciences

0324 Available Formats: conventional/flex

1324 Available Formats: conventional/flex and internet

0324 Campuses: Levelland and Reese

1324 Campuses: Levelland, Reese, and Dual Credit

0324 Course Description: Math0324 is to be taken concurrently with MATH 1324. Background topics which are necessary for a student to successfully complete MATH 1324 will be covered, with an emphasis on fractions, factoring polynomials, functions, exponents, and operating with radical expressions.

1324 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.

0324 Prerequisite: Minimum score of 340 on the TSIA, or a successful completion with a grade of 'C' or better in MATH 0315.

1324 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.

0324 Credit: 3 **Lecture:** 3 **Lab:** 1

1324 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:

0324: None

1324: 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.
2. Solve mathematics of finance problems, including the computation of interest, annuities, and amortization of loans.
3. Apply basic matrix operations, including linear programming methods, to solve application problems.
4. Demonstrate fundamental probability techniques and application of those techniques, including expected value, to solve problems.
5. Apply matrix skills and probability analyses to model applications to solve real-world problems.

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. 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 Fall 2020 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.

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 [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 the Director of Health and Wellness at 806-716-2362 or [email cgilster@southplainscollege.edu](mailto: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: <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 0324/1324.C001 Math for Business and Social Sciences (CoReq)
MTWR 10:00 – 11:45 Math 122 Fall 2020

Instructor: Jennifer Bartlett
Office: Levelland Campus, Math Building Room 113
Telephone: (806) 716-2664
Email: jkbartlett@southplainscollege.edu

Office Hours:
 Mon & Wed 8:30-10:00 in Levelland Math 113,
 Tues & Thurs 9:15-10:00 in Levelland Math 113,
 2:20-4:20 at TTU ENGLPHL 264,
 or by appointment.

Virtual Office Hours Zoom Link:
<https://southplainscollege.zoom.us/j/3468755641>

Course Materials:

- Calculator: You are required to bring your calculator to EVERY class. You may use a graphing calculator on most homework, quizzes, and exams. TI-83, TI-83+, TI-84+ are preferred, but many others are also acceptable. Cell phones and similar devices may NOT be used as calculators and no sharing of calculators is allowed. If you have any questions about your calculator check with the instructor immediately.
- 3-ring binder (3 inch), dividers, paper, graph paper, hole punch, pencils, and erasers
- Access to a reliable internet service, a way to print and scan documents, a device with the capability to participate in Zoom meetings with video and audio

Homework: Homework will be assigned at each class meeting and will be submitted through Blackboard as a SINGLE PDF document. No late assignments will be accepted. You should show all work when doing homework. Simply writing the problem and the answer is not “doing homework.” Using a solution manual or an app that shows you the steps, and copying them down is NOT “doing homework.” Remember your effort is key to your success. You have to focus your effort on being able to complete the problems on a quiz/exam without any outside resources. You are responsible for the following homework requirements. Any homework that does not follow the homework requirements will be recorded as a grade of a zero.

Homework Requirements:

- 1) Assignments must be submitted through Blackboard by the beginning of the next class period. Late homework will not be accepted.
- 2) Multiple pages must be scanned, saved, and submitted as a SINGLE PDF document.
- 3) Assignments must be written in pencil on white 8.5 x 11 inch paper. It must be neat and legible. I will be the judge as to what is neat. Just because you can read it doesn't mean that I can interpret it.
- 4) Assignments must be presented in an orderly manner with the problem running in a single or double column down the page. No more than double column work will be graded.
- 5) All final answers must be circled to receive credit. Any algebraic answer not circled or “boxed” in will not be graded. Pictures/graphs do not need to be circled or boxed.

Notebook: You will keep all class materials (notes, handouts, homework, quizzes, exams, etc.) organized in a notebook (3-ring binder) . These materials should be neat, brought to every class period, and will be used as a reference and study guide.

Quizzes: Short, in-class quizzes that will be given regularly will have problems selected from, or closely related to, your homework. Most, if not all, quizzes will be pop-quizzes so you will need to be prepared every class period. Students arriving late may be denied the chance to take a quiz, if there is one that day. Quizzes must be taken in pencil.

Exams: Exams must be taken in pencil. Student may not leave the examination room for any reason without turning in their exam for grading. The tentative exam dates are on the course calendar below. If classes are moved to an online format, exams will be recorded.

Final: The comprehensive final will be given on Monday, December 7th from 10:15 – 12:15 as directed by the official South Plains College Schedule. No make-up final will be given. The final will cover all material covered in-class.

Make-up: Make-up work is given at the discretion of the instructor. NO make-up quizzes or tests are given without prior notification AND proper documentation. If are absent from class, have given prior notification and proper documentation of your absence, you MUST make arrangements to take the quiz or test BEFORE the next class period. Students who do not take quizzes or exams in-class, early or late, forfeit the right to attempt any extra credit on that quiz or exam.

Grading Policy:

Daily Work (HW, quizzes, labs)	10%
Exams (8 total)	70%
Comprehensive Final	20%

Grading Scale (1324):

90-100%	A
80-89%	B
70-79%	C
60-69%	D
Below 60%	F

Grades will be updated on Blackboard during the semester usually after exams. If you make a grade of A, B, or C then that is the grade you will be awarded for both courses: 0324, and 1324. However, if you complete the course and make a grade of a D or F, then your grade for the 0324 course will be assessed at your instructor's discretion. If you pass MATH 0324 but do not pass the MATH 1324 portion, you will be able to register for MATH 1324 in future semesters.

Student Responsibilities and Expectations:

1. Come to class on time and prepared to learn. (Pencils, homework, notebook, calculator)
2. Read the syllabus.
3. Take notes, participate in class, and complete course assignments early enough to seek help if needed.
4. Food and drink are not allowed in class, with the exception of bottled water.
5. Cell phones and any other electronic devices must be silenced and put away before entering the classroom. Use of these devices during class will result in a zero for that day's quiz, homework, or exam.
6. Be courteous and respectful to your instructor and classmates at all times.

Resources:

- I am your first and BEST resource for this class! Feel free to come by during my office hours or email me.
- Blackboard is the online course management system that will be used for this course. The course syllabus as well as any other class handouts can be accessed through Blackboard. Login at <http://southplainscollege.blackboard.com> . The user name and password should be the same as the MySPC and SPC email.
User name: first initial, last name, and last 4 digits of the Student ID
Password: Original Campus Connect Pin No. (found on SPC acceptance letter)
- Free tutoring is available in M116 on the Loveland campus. Hours for the tutors will be posted by the door of M116.
- Form study groups: Networking is an essential tool both in the classroom and in the workforce!
- Websites that contain helpful videos:
patrickjmt.com
khanacademy.com

Math 0324/1324.C001 Tentative Calendar Fall 2020				
Week	Day	Date	Topic	Homework Due
1	Monday	Aug 24	Syllabus, 1.1: Integer Rules, Fraction Multiplication & Division	
	Tuesday	Aug 25	1.2: Fraction Addition & Subtraction, Order of Operations	
	Wednesday	Aug 26	1.3: Exponent Properties	
	Thursday	Aug 27	1.4: Radical Properties	
2	Monday	Aug 31	1.5: Polynomials: Add, Subtract, Multiply Radicals: Add, Subtract Factoring: GCF, Trinomials	
	Tuesday	Sept 1	1.6: Factoring with Leading Coefficient not 1, Special Products	
	Wednesday	Sept 2	1.7: Factoring Summary	
	Thursday	Sept 3	Review for Exam 1	
3	Monday	Sept 7	<i>No School: Labor Day Holiday</i>	
	Tuesday	Sept 8	EXAM 1	
	Wednesday	Sept 9	2.1: Rational Expressions	
	Thursday	Sept 10	2.2: Solving Linear and Absolute Value Equations	
4	Monday	Sept 14	2.3: Solving by Factoring, Quadratic Formula	
	Tuesday	Sept 15	2.4: Solving by Square Root Property, Complete the Square	
	Wednesday	Sept 16	2.5: Solve Rational Equations	
	Thursday	Sept 17	Review for Exam 2	
5	Monday	Sept 21	EXAM 2	
	Tuesday	Sept 22	3.1: The Coordinate Plane & Equations of Lines	
	Wednesday	Sept 23	3.2: Linear Business Applications	
	Thursday	Sept 24	3.3: Interval Notation & Linear Inequalities	
6	Monday	Sept 28	3.4: Functions & Their Equations	
	Tuesday	Sept 29	3.5: Functions & Their Graphs	
	Wednesday	Sept 30	Review for Exam 3	
	Thursday	Oct 1	EXAM 3	
7	Monday	Oct 5	4.1: Quadratic Functions and Applications	
	Tuesday	Oct 6	4.2: Polynomial Functions	
	Wednesday	Oct 7	4.3: Rational Functions	
	Thursday	Oct 8	Unit 4 Worksheet & Review for Exam 4	

8	Monday	Oct 12	EXAM 4	
	Tuesday	Oct 13	5.1: Exponential & Log Functions	
	Wednesday	Oct 14	5.2 Log Properties & Log Equations	
	Thursday	Oct 15	5.3: Exponential Equations	
	Friday	Oct 16	<i>No School: SPC Fall Break</i>	
9	Monday	Oct 19	5.4: Logarithmic and Exponential Applications	
	Tuesday	Oct 20	Review for Exam 5	
	Wednesday	Oct 21	EXAM 5	
	Thursday	Oct 22	6.1: Simple & Compound Interest	
10	Monday	Oct 26	6.2: Future Value of an Annuity	
	Tuesday	Oct 27	6.3: Present Value of an Annuity	
	Wednesday	Oct 28	Unit 6 Lab	
	Thursday	Oct 29	Review for Exam 6	
11	Monday	Nov 2	EXAM 6	
	Tuesday	Nov 3	7.1: Systems of Two Linear Equations	
	Wednesday	Nov 4	7.2: Gauss-Jordan Elimination (GJE)	
	Thursday	Nov 5	7.3: Applications of Systems	
12	Monday	Nov 9	7.4: Products and Inverses of Matrices	
	Tuesday	Nov 10	7.5: Applications of Matrices – Leontief Input-Output Models	
	Wednesday	Nov 11	EXAM 7	
	Thursday	Nov 12	8.1: Graphing Linear Inequalities & Graphical Linear Programming	
13	Monday	Nov 16	8.2: Graphical Linear Programming Applications	
	Tuesday	Nov 17	8.3: Linear Programming: Simplex Method	
	Wednesday	Nov 18	8.4: Simplex Method Applications	
	Thursday	Nov 19	<i>Last Day to Drop a Course</i> 8.5: Simplex Method: Nonstandard Problems	
14	Monday	Nov 23	Review for Exam 8	
	Tuesday	Nov 24	EXAM 8	
	Wed-Fri	Nov 25-27	<i>No School: Thanksgiving Break</i>	
15	Monday	Nov 30	9.1: Introduction to Probability & Expected Value	
	Tuesday	Dec 1	9.2: Markov Chains	
	Wednesday	Dec 2	Review for Final	
	Thursday	Dec 3	Review for Final	
16	Monday	Dec 7	Final Exam (20%) 10:15 – 12:15	