

South Plains College
Common Course Syllabus: MATH 0324/1324
Revised August 2021

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, hybrid, and internet **1324 Available Formats:** conventional, hybrid, 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 TSIA1, minimum diagnostic score of 3 on the TSIA2, a successful completion with a grade of 'C' or better in MATH 0315, or a successful completion of NCBM-0105.

1324 Prerequisite: Minimum score of 350 on the TSIA1, minimum score of 950 on the TSIA2, a diagnostic score of 6 on the TSIA2, TSI-exempt status, a successful completion with a grade of 'C' or better in MATH 0320, or successful completion of NCBM-0114.

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/Student Engagement Policy: Attendance and engagement are the most critical activities for success in this course. The instructor maintains records of the student's attendance and submission of assignments throughout the semester. The student is expected to attend at least eighty percent (80%) of the **total** class meetings **and** submit at least eighty percent (80%) of the **total** class assignments to have the best chance of success. If the student fails to meet these minimum requirements, the instructor may remove the student from the class with an X, upon their discretion, to help the student from harming their GPA. If the student can not receive an X, the instructor will assign an F.

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 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. There will be no requirement for face coverings at any location on any South Plains College campus or classroom. Faculty, staff, or students may continue to wear a mask voluntarily, but there will be no requirements for face coverings in any circumstance.

If you are experiencing any of the following symptoms please do not attend class and either seek medical attention or get tested for COVID-19.

- Cough, shortness of breath, difficulty breathing
- Fever or chills
- Muscles or body aches
- Vomiting or diarrhea
- New loss of taste and smell

Please also notify DeEtte Edens, BSN, RN, Associate Director of Health & Wellness, at dedens@southplainscollege.edu or 806-716-2376.

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 rcanon@southplainscollege.edu](mailto:rcanon@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.

Spring 2022 Math 0324/1324.C001 Math for Business and Social Sciences (CoReq)

Mondays & Wednesdays: 12:30-2:15pm in Math 128

Tuesdays & Thursdays: Online

Instructor: Jennifer Bartlett

Office: Levelland Campus, Math Building Room 113

Telephone: (806) 716-2664

Email: jkbartlett@southplainscollege.edu

Office Hours:

Mon & Wed 8:30-11:30 in Levelland Math 113,

Friday 8:30-10:30 virtual on Zoom,

or by appointment face-to-face or zoom

Virtual Office Hours Zoom Link:

<https://southplainscollege.zoom.us/j/97739016686>

Course Materials:

- Textbook: A textbook is not required. The above mentioned textbook would be the one I would recommend if you would like to purchase a book.
- 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 (about 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 before 12:30pm. Late homework will not be accepted.
- 2) For every section, 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) Nothing on the assignment sheet will be graded. All work and answers must be done on your own paper.
- 5) 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.
- 6) 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.
- 7) No late homework will be accepted. It is highly recommended that you work ahead of the due dates just in case computer problems, life problems or problems in general pop up.

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. Exams may be given via zoom and recorded in case of school closures.

Final: The comprehensive final will be given on Wednesday, May 11th from 10:15am to 12:15pm. 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. Math 0324 will be graded as Pass/Fail. If a grade of A, B, or C is earned in Math 1324, then a grade of Pass will be awarded in Math 0324. If a grade of D or F is earned in Math 1324, then a grade of Pass or Fail will be awarded for Math 0324 at the 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. Watch the course videos on the days that we have virtual/online class, take notes, and complete your assignment
3. Take notes, participate in class, and complete course assignments early enough to seek help if needed.
4. Let your instructor know if you are not going to be present in class, before you miss the classperiod.
5. Food and drink are not allowed in class, with the exception of bottled water.
6. 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.
7. 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.
- Our Academic Coach is also a great resource. They have taken my class before and know exactly what you are going through.
- 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 on the Levelland campus, Reese Campus, and Lubbock campus. See info below about tutoring
- 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

Tutoring:**In-Person SPC Tutors: (before 8pm)**

Tutoring is FREE for all currently enrolled students. Make an appointment or drop-in for help at any SPC location or online! Visit the link below to learn more about how to book an appointment, view the tutoring schedule, and view tutoring locations.

<http://www.southplainscollege.edu/exploreprograms/artsandsciences/teacheredtutoring.php>

Online Tutoring at Tutor.com: (after 8pm)

You also have 180 FREE minutes of tutoring with Tutor.com each week, and your hours reset every Monday morning. Log into Blackboard, click on the tools option from the left-hand menu bar. Click on the Tutor.com link and you will automatically be logged in for free tutoring. You may access tutor.com tutors during the following times:

Monday – Thursday: 8pm-8am

6pm Friday – 8am Monday morning

For questions regarding tutoring, please email tutoring@southplainscollege.edu or call 806-716-2538.

Math 0324/1324.C001 Tentative Calendar Spring 2021 MW: Face-to-Face in Math 123 TR: Online			
Week	Date	Topic	Homework Due (12:30pm)
Week 1	Jan 17 – M	No School – MLK Holiday	
	Jan 18 – T	Get familiar with the course: Syllabus, Blackboard, How to Scan and Submit Assignments	
	Jan 19 – W	1.1: Integer Rules, Fraction Multiplication & Division	
	Jan 20 – R	1.2: Fraction Addition & Subtraction, Order of Operations	1.1
Week 2	Jan 24 – M	1.3: Exponent Properties	1.2
	Jan 25 – T	1.4: Radical Properties	1.3
	Jan 26 – W	1.5: Polynomials: Add, Subtract, Multiply Radicals: Add, Subtract Factoring: GCF, Trinomials	1.4
	Jan 27 – R	1.6: Factoring with Leading Coefficient not 1, Special Products	1.5
Week 3	Jan 31 – M	1.7: Factoring Summary	1.6
	Feb 1 – T	Review for Unit 1 Exam	1.7
	Feb 2 – W	Unit 1 Exam	Unit 1 Exam Review
	Feb 3 – R	2.1: Rational Expressions	
Week 4	Feb 7 – M	2.2: Solving Linear and Absolute Value Equations	2.1
	Feb 8 – T	2.3: Solving by Factoring, Quadratic Formula	2.2
	Feb 9 – W	2.4: Solving by Square Root Property, Complete the Square	2.3
	Feb 10 – R	2.5: Solve Rational Equations	2.4
Week 5	Feb 14 – M	Unit 2 Lab, Review for Unit 2 Exam	2.5
	Feb 15 – T	Review for Unit 2 Exam	
	Feb 16 – W	Unit 2 Exam	Unit 2 Exam Review
	Feb 17 – R	3.1: The Coordinate Plane & Equations of Lines	
Week 6	Feb 21 – M	3.2: Linear Business Applications	3.1
	Feb 22 – T	3.3: Supply & Demand, Interval Notation, & Linear Inequalities	3.2
	Feb 23 – W	3.4: Functions & Their Equations	3.3
	Feb 24 – R	3.5: Functions & Their Graphs	3.4
Week 7	Feb 28 – M	Unit 3 Exam	3.5, Unit 3 Exam Review
	March 1 – T	4.1: Quadratic Functions	
	March 2 – W	4.2: Polynomial Functions	4.1
	March 3 – R	4.3: Rational Functions	4.2
Week 8	March 7 – M	Unit 4 Lab, Review for Unit 4 Exam	4.3
	March 8 – T	Review for Unit 4 Exam	

	March 9 – W	Unit 4 Exam	Unit 4 Exam Review
	March 10 – R	5.1: Exponential & Log Functions	
	March 14-18	<i>No School – Spring Break</i>	
Week 9	March 21 – M	5.2 Log Properties & Log Equations	5.1
	March 22 – T	5.3: Exponential Equations & Applications	5.2
	March 23 – W	Unit 5 Lab, Review for Unit 5 Exam	5.3
	March 24 – R	Review for Unit 5 Exam	
Week 10	March 28 – M	Unit 5 Exam	Unit 5 Exam Review
	March 29 – T	6.1: Simple & Compound Interest	
	March 30 – W	6.2: Future Value of an Annuity	6.1
	March 31 – R	6.3: Present Value of an Annuity	6.2
Week 11	April 4 – M	Unit 6 Lab, Review for Unit 6 Exam	6.3
	April 5 – T	Review for Unit 6 Exam	
	April 6 – W	Unit 6 Exam	Unit 6 Exam Review
	April 7 – R	7.1: Gauss-Jordan Elimination (GJE)	
Week 12	April 11 – M	7.2: Applications of Systems	7.1
	April 12 – T	7.3: Matrix Operations and Inverses	7.2
	April 13 – W	7.4: Applications of Matrices – Leontief Input-Output Models	7.3
	April 14 – R	Review for Unit 7 Exam	7.4
Week 13	April 18 – M	Unit 7 Exam	Unit 7 Exam Review
	April 19 – T	8.1: Linear Programming: Simplex Method	
	April 20 – W	8.2: Simplex Method Applications	8.1
	April 21 – R	8.3: Simplex Method: Nonstandard Problems (Two-Phase Method)	8.2
Week 14	April 25 – M	9.1: Introduction to Probability & Expected Value	8.3
	April 26 – T	9.2: Markov Chains	9.1
	April 27 – W	Review for Unit 8 & 9 Exam	9.2
	April 28 – R	<i>Last Day to Drop a Course</i> Review for Unit 8 & 9 Exam	Unit 8 & 9 Exam Review
Week 15	May 2 – M	Unit 8 & 9 Exam	
	May 3 – T	Review for Final Exam	
	May 4 – W	Review for Final Exam	
	May 5 – R	Review for Final Exam	
Week 16	May 11 - W	Final Exam 10:15-12:15	