

South Plains College
Common Course Syllabus: MATH 0324/1324
Revised December 2019

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

1324 Available Formats: conventional 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. 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 [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 Spring 2020

Instructor: Mrs. Jennifer K Bartlett
Office: Levelland Campus, Math 113
Office Phone: 806-716-2664

Email: jkbartlett@southplainscollege.edu
Office Hours: MW 8:30-10:00, TR 9:15-10:00
 F 8:30-12:00, or by appointment

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.
- You will need a 3-ring binder (3 inch), dividers, paper, graph paper, hole punch, pencils, and erasers.

Homework: Homework will be assigned at each class meeting. The homework is not a tool by which I torture you, but rather an opportunity for you to practice the skills presented in class which you will be responsible to demonstrate on a quiz the following class period. If you are interested in passing the class, you will need to do well on the quizzes. To do well on the quizzes, you will need to complete the homework. 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 solutions 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) It must be turned in at the beginning of the class period. Late homework will not be accepted. Late is defined to be: anything turned in after the start of the class period.
- 2) Homework 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.
- 3) If you have more than one page to turn in, the pages must be stapled together. Multiple pages that are not stapled or held together by a paperclip, folded corner, spit, gum, etc. will not be accepted and be recorded with a grade of zero. You must staple multiple pages together.
- 4) Homework must be presented in an orderly manner with the problem running in a single column down the page.
- 5) ALL WORK must be shown in order to receive credit for each problem.
- 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) All assignments must be done in pencil.

No work will be graded that has been done on the given assignment sheet. The given assignment sheet is a cover sheet for your assignment. Graded work must be done on your own paper with all work and steps shown.

Notebook: You will be required to keep all class materials (notes, handouts, homework, quizzes, exams, etc.) organized in a notebook (3-ring binder). These materials are subject to be turned in for grading at any time. Please make certain all materials accompany you to each class meeting. The notebook will have 4 dividers labeled the following: Notes, Homework, Quizzes & Labs, and Reviews & Exams. You will keep the corresponding material under the matching divider.

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.

Final: The comprehensive final will be given on Monday, May 4th 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 posted 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.
7. Use only pencil for all assignments.

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 Levelland 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 Spring 2020				
Week	Day	Date	Topic	Homework Due
1	Monday	Jan 13	Syllabus, 1.1: Integer Rules, Fraction Multiplication & Division	
	Tuesday	Jan 14	1.2: Fraction Addition & Subtraction, Order of Operations	
	Wednesday	Jan 15	1.3: Exponent Rules & Radicals	
	Thursday	Jan 16	1.4: Polynomials: Add, Subtract, Multiply Radicals: Add, Subtract Factoring: GCF, Trinomials	
2	Monday	Jan 20	<i>No School: MLK Holiday</i>	
	Tuesday	Jan 21	1.5: Factoring with Leading Coefficient not 1, Special Products	
	Wednesday	Jan 22	1.6: Factoring Summary	
	Thursday	Jan 23	Review for Exam 1	
3	Monday	Jan 27	EXAM 1	
	Tuesday	Jan 28	2.1: Rational Expressions	
	Wednesday	Jan 29	2.2: Solving Linear and Absolute Value Equations	
	Thursday	Jan 30	2.3: Solving by Factoring, Quadratic Formula	
4	Monday	Feb 3	2.4: Solving by Square Root Property, Complete the Square	
	Tuesday	Feb 4	2.5: Solve Rational Equations	
	Wednesday	Feb 5	Review for Exam 2	
	Thursday	Feb 6	<i>No Class</i>	
5	Monday	Feb 10	EXAM 2	
	Tuesday	Feb 11	3.1: The Coordinate Plane & Equations of Lines	
	Wednesday	Feb 12	3.2: Linear Business Applications	
	Thursday	Feb 13	3.3: Interval Notation & Linear Inequalities	
6	Monday	Feb 17	3.4: Functions & Their Graphs	
	Tuesday	Feb 18	Review for Exam 3	
	Wednesday	Feb 19	EXAM 3	
	Thursday	Feb 20	4.1: Quadratic Functions and Applications	
7	Monday	Feb 24	4.2: Polynomial Functions	
	Tuesday	Feb 25	4.3: Rational Functions	
	Wednesday	Feb 26	Unit 4 Worksheet	
	Thursday	Feb 27	Review for Exam 4	

8	Monday	March 2	EXAM 4	
	Tuesday	March 3	5.1: Exponential & Log Functions	
	Wednesday	March 4	5.2 Log Properties & Log Equations	
	Thursday	March 5	5.3: Exponential Equations	
9	Monday	March 9	5.4: Logarithmic and Exponential Applications	
	Tuesday	March 10	Review for Exam 5	
	Wednesday	March 11	EXAM 5	
	Thursday	March 12	6.1: Simple & Compound Interest	
	Mon – Fri	March 16 – March 20	<i>No School: Spring Break</i>	
10	Monday	March 23	6.2: Future Value of an Annuity	
	Tuesday	March 24	6.3: Present Value of an Annuity	
	Wednesday	March 25	Unit 6 Lab	
	Thursday	March 26	Review for Exam 6	
11	Monday	March 30	EXAM 6	
	Tuesday	March 31	7.1: Systems of Two Linear Equations	
	Wednesday	April 1	7.2: Gauss-Jordan Elimination (GJE)	
	Thursday	April 2	7.3: Direct Translation & Word Problems	
12	Monday	April 6	7.4: Applications of Systems	
	Tuesday	April 7	7.5: Products and Inverses of Matrices	
	Wednesday	April 8	7.6: Applications of Matrices – Leontief Input-Output Models	
	Thursday	April 9	EXAM 7	
13	Monday	April 13	<i>No School: Easter Holiday</i>	
	Tuesday	April 14	8.1: Graphing Linear Inequalities & Graphical Linear Programming	
	Wednesday	April 15	8.2: Graphical Linear Programming Applications	
	Thursday	April 16	8.3: Linear Programming: Simplex Method	
14	Monday	April 20	8.4: Simplex Method Applications	
	Tuesday	April 21	8.5: Simplex Method: Nonstandard Problems	
	Wednesday	April 22	Review for Exam 8	
	Thursday	April 23	EXAM 8 <i>Last Day to Drop a Class at SPC</i>	
15	Monday	April 27	9.1: Introduction to Probability & Expected Value	
	Tuesday	April 28	9.2: Markov Chains	
	Wednesday	April 29	Review for Final	
	Thursday	April 30	Review for Final	
16	Monday	May 4	Final Exam 10:15 – 12:15	