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 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.

Fall 2021 Math 0324/1324.C151 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:
- 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 my 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, December 15th 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. 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.
- 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. Hours for the tutors will be posted by the door of Math 116 on the Levelland campus and on Blackboard.
- 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

Week	Date	Topic	Homework Due (12:30pm)
		Math 0324/1324.C001 Tentative Calendar Fall 2021 **MW: Face-to-Face in Math TR: Online**	
Week 1	Aug 30 – M	Syllabus, 1.1: Integer Rules, Fraction Multiplication & Division	
	Aug 31 – T	1.2: Fraction Addition & Subtraction, Order of Operations	1.1
	Sept 1 – W	1.3: Exponent Properties	1.2
	Sept 2 – R	1.4: Radical Properties	1.3
Week 2	Sept 6 – M	*No School: Labor Day Holiday*	

	Sept 7 – T	1.5: Polynomials: Add, Subtract, Multiply
		  Radicals: Add, Subtract
		  Factoring: GCF, Trinomials
			1.4

	Sept 8 – W	1.6: Factoring with Leading Coefficient not 1, Special Products	1.5
	Sept 9 – R	1.7: Factoring Summary	1.6
Week 3	Sept 13 – M	**Unit 1 Exam**	1.7, Unit 1 Exam Review
	Sept 14 – T	2.1: Rational Expressions	
	Sept 15 – W	2.2: Solving Linear and Absolute Value Equations	2.1
	Sept 16 – R	2.3: Solving by Factoring, Quadratic Formula	2.2
Week 4	Sept 20 – M	2.4: Solving by Square Root Property, Complete the Square	2.3
	Sept 21 – T	2.5: Solve Rational Equations	2.4
	Sept 22 – W	Review for Unit 2 Exam	2.5
	Sept 23 – R	Review for Unit 2 Exam	Unit 2 Exam Review
Week 5	Sept 27 – M	**Unit 2 Exam**	
	Sept 28 – T	3.1: The Coordinate Plane & Equations of Lines	
	Sept 29 – W	3.2: Linear Business Applications	3.1
	Sept 30 – R	3.3: Supply & Demand, Interval Notation, & Linear Inequalities	3.2
Week 6	Oct 4 – M	3.4: Functions & Their Graphs	3.3
	Oct 5 – T	Review for Unit 3 Exam	3.4
	Oct 6 – W	**Unit 3 Exam**	Unit 3 Exam Review
	Oct 7 – R	4.1: Quadratic Functions	
Week 7	Oct 11 – M	4.2: Polynomial Functions	4.1
	Oct 12 – T	4.3: Rational Functions	4.2
	Oct 13 – W	Unit 4 Lab	4.3
	Oct 14 – R	Review for Unit 4 Exam	Unit 4 Lab

Week 8	Oct 18 – M	**Unit 4 Exam**	Unit 4 Exam Review
	Oct 19 – T	5.1: Exponential & Log Functions	
	Oct 20 – W	5.2 Log Properties & Log Equations	5.1
	Oct 21 – R	5.3: Exponential Equations & Applications	5.2
Week 9	Oct 25 – M	Unit 5 Lab	5.3
	Oct 26 – T	Review for Unit 5 Exam	
	Oct 27 – W	**Unit 5 Exam**	Unit 5 Exam Review
	Oct 28 – R	6.1: Simple & Compound Interest	
Week 10	Nov 1 – M	6.2: Future Value of an Annuity	6.1
	Nov 2 – T	6.3: Present Value of an Annuity	6.2
	Nov 3 – W	Unit 6 Lab	6.3
	Nov 4 – R	Review for Unit 6 Exam	
Week 11	Nov 8 – M	**Unit 6 Exam**	Unit 6 Exam Review
	Nov 9 – T	7.1: Gauss-Jordan Elimination (GJE)	7.1
	Nov 10 – W	7.2: Applications of Systems	7.2
	Nov 11 – R	7.3: Matrix Operations and Inverses	7.3
Week 12	Nov 15 – M	7.4: Applications of Matrices – Leontief Input-Output Models	7.4
	Nov 16 – T	Review for Unit 7 Exam	
	Nov 17 – W	**Unit 7 Exam**	Unit 7 Exam Review
	Nov 18 – R	8.1: Linear Programming: Simplex Method	
Week 13	Nov 22 – M	8.2: Simplex Method Applications	8.1
	Nov 23 – T	8.3: Simplex Method: Nonstandard Problems (Two-Phase Method)	8.2
	Nov 24-26	*No School: Thanksgiving Break*	
Week 14	Nov 29 – M	9.1: Introduction to Probability & Expected Value	8.3
	Nov 30 – T	9.2: Markov Chains	9.1
	Dec 1 – W	Review for Exam 8	9.2
	Dec 2 – R	*Last Day to Drop a Course* Review for Exam 8	Unit 8 & 9 Exam Review
Week 15	Dec 6 – M	**Unit 8 & 9 Exam**	
	Dec 7 – T	Review for Final Exam	
	Dec 8 – W	Review for Final Exam	
	Dec 9 – R	Review for Final Exam	
Week 16	Dec 15 - W	**Final Exam 10:15-12:15**	