
Syllabus for

Mathematics 1324 / Math for Business & Social Sciences/ Section 364/365/366 / Spring 2023

Instructor: Dr. Paul M. Tunstall

Office Hours: during regular school hours

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MATH-1324 Math-Busi & Soc Sci Lab Add (3 Credits)

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. Pre-requisite: Two units of high school algebra or MATH 0320.

Reference Textbook

Mathematics with applications in business and social sciences. Bess, Glover, and Vance, 2022, 1st Edition, Hawkes Learning.

Supplies

A supply of pencils, pens, and one or more folders for keeping and completing assignments, taking notes, etc., will be needed.

General Course Purpose

The purpose of the course is to provide a fundamental background in trigonometry to meet the mathematics requirement for the core curriculum and to provide a basis for further study in mathematics.

General Course Requirements

To maximize the potential to complete this course, a student should attend all class meetings, take notes and participate in class, complete all homework assignments and examinations including final examinations.

General Disclaimer

To successfully complete the course objectives, the students must already be prepared to factor algebraic expressions, reduce, add, subtract, multiply, divide, and simplify rational expressions, and simplify, add, subtract, multiply and divide exponential and radical expressions.

Class Cancellation Notice

In the event of class being cancelled, the student will make up work on a revised schedule.

Grading Policies*

| | | |
|----------------------|--------------|---|
| <i>Grading Scale</i> | 90 or above | A |
| | 80 to 89 | B |
| | 70 to 79 | C |
| | 59 and Below | F |

***Notes:**

- 1) The final exam will count as a Major Test grade.
- 2) Students must justify answers or show

Assignment Weights Major Test Grades 60%

| | |
|----------------|------|
| Daily Grades | 40% |
| Semester Grade | 100% |

work on all problems to receive full credit.

- 3) These weights may vary slightly from your high school grade in this course.

Finality of Grades

The Final Semester Grade cannot be changed once submitted to the SPC registrar.
A grade of C (70%) or above is required to advance to the next course

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:

- Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.
- Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.
- Apply graphing techniques.
- Evaluate all roots of higher degree polynomial and rational functions.
- Recognize, solve and apply systems of linear equations using matrices.

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.

Academic Honesty & Equal Opportunity

Students are expected to uphold the ideas of academic honesty as noted in the common course syllabus. All work that is graded must be your own. This policy applies to all work attempted in this course. If this policy is violated the student will receive an F for the assignment and will be dropped with an **F**. For more details on what is considered cheating, see the South Plains College catalog.

As noted in the common course syllabus, South Plains College strives to accommodate the individual needs of all students in order to enhance their opportunities for success in the context of a comprehensive community college setting. It is the policy of South Plains College to offer all educational and employment opportunities without regard to race, color, national origin, religion, gender, disability, or age.

Plagiarism violations include, but are not limited to, the following:

- 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;
- Cutting and pasting together information from books, articles, other papers, or online sites without providing proper documentation;
- Using direct quotations (three or more words) from a source without showing them to be direct quotations and citing them; or
- Missing in-text citations.

Cheating violations include, but are not limited to, the following:

- Obtaining an examination by stealing or collusion;
- Discovering the content of an examination before it is given;
- Using an unauthorized source of information (notes, textbook, text messaging, internet, apps) during an examination, quiz, or homework assignment;
- Entering an office or building to obtain an unfair advantage;
- Taking an examination for another;
- Altering grade records;
- Copying another's work during an examination or on a homework assignment;
- Rewriting another student's work in Peer Editing so that the writing is no longer the original student's;
- 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.

Expectations of the Instructor for the Student

The instructor is within all rights to expect that the student do the following:

- Show up on time, as scheduled, to receive and learn all information pertinent to the course and be mindful of any schedule changes.
- If you are going to drop this or any other SPC course, **all drops must be completed by April 27, 2022**. There will be no drops given after this date.
- Read the syllabus! You will remain subject to the criteria outlined herein whether you read this or not, so it is in your best interest to do so! Take advantage of all resources available to you. In the collegiate setting, all students are considered adults and are expected to uphold conduct worthy of such consideration.
- 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. 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 the instructor that you are prepared to learn.
- Be willing to work together with – but not do work for – fellow classmates. Networking is an essential tool both in the workforce and the in the classroom; furthermore, the greater the number of minds there are involved, the less mental labor is required for each individual.
- Keep all homework assignments organized in a folder or binder. Online assignments must be completed in your folder. This will prove to be helpful in preparing for the exams. Write all graded work legibly and generally in pencil. Work early enough to get help if needed.
- Turn all electronic devices off that have no use in the classroom setting. If an unsanctioned device is in use inappropriately during an exam, then its grade will be zero percent (0%).
- Electronic devices will be used for their initial intended function only.
- Students may obtain missed information and assignments from a fellow classmate when necessary.

Resources

Classwork is expected to be done as assigned. Written assignments and may also be given as necessary where long-form answers are required. Any long-form answers must have all work shown in an organized fashion, and all answers must be given in complete, grammatically correct sentences that convey a logical thought process and answer the question or address the issue. Late work is not accepted.

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.

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 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 SEMESTER SCHEDULE SPRING 2023 TUNSTALL

| MONTH | TOPICS |
|--------------|--|
| January | INTRODUCTION, GRAPHS, & LINES |
| January | LINEAR EQUATIONS & INEQUALITIES |
| January | SYSTEMS OF LINEAR EQUATIONS & MATRIX METHODS |
| February | MATRIX ARITHMETIC & MATRIX ALGEBRA |
| February | LINEAR PROGRAMMING WITH GRAPHS |
| February | LINEAR PROGRAMMING WITH THE SIMPLEX METHOD |
| February | NON-STANDARD SIMPLEX METHOD PROBLEMS |
| March | INTRODUCTION TO FUNCTIONS & LINEAR FUNCTIONS |
| March | SPRING BREAK |
| March | POLYNOMIAL & RATIONAL FUNCTIONS |
| March | EXPONENTIAL FUNCTIONS |
| April | LOGARITHMIC FUNCTIONS |
| April | SIMPLE & COMPOUND INTEREST |
| April | ANNUITIES |
| April | PROBABILITY |
| April | EXPECTED VALUE & BINOMIAL PROBABILITIES |
| May | MARKOV CHAINS |
| May | FINAL EXAM |
| | END SPRING SEMESTER |