

South Plains College
Math 1324.005TR Syllabus
Mathematics for Business, Economics, Life and Social Sciences
Fall 2018

Instructor: Mrs. Morgan Groves

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Office: M101

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Office Hours: MW 11am – 12pm

TR 7:50am – 8:50am, 12:45pm – 1:45pm

F 8am – 11am

Textbook: *Mathematics with Applications in Management, Natural, and Social Sciences*, 12e, Lial, Hungerford, Holcomb, Mullins. You do NOT need the MyMathLab access code but you will need to gain access to Knewton.

Course Description: This course is designed for Business, Economics, and Life and Social Science majors. It is a heavy application course, meaning the course is primarily word problems relating to the majors listed previously. This section of 1324 requires each student to utilize Knewton for the online homework as well as coming to class each day with the notes provided by the instruction online at southplainscollege.blackboard.com.

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

Student Learning Outcomes/Competencies:

Upon successful completion of this course students should be able to competently perform the following:

1. Demonstrate and apply knowledge of functions, including domain, range, composition, and inverses.
2. Understand polynomial, rational, radical, exponential, and logarithmic functions, and solve related equations and applications.
3. Use functions to model and understand interest, including annuities, sinking funds, and amortizations.
4. Solve systems of linear and non-linear equations, and apply them to solve problems.
5. Use matrix methods to solve systems of linear equations and linear programs.

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| Grading: | Tests (4 total) | 60% | <u>Grading Scale:</u> | A 90-100 |
| | Homework/Labs | 20% | | B 80-89 |
| | Final Exam | 20% | | C 70-79 |
| | Bonus Tests | 5% | | D 60-69 |
| | | | | F 59 or below |

***Note: Students must justify answers or show work on all problems to receive full credit.

Homework: All homework assignments will be online through a system called Knewton. You can find directions for creating a student account and getting registered into the online homework system attached. Homework is to be completed by the due dates posted on each assignment. No late homework will be accepted.

Tests: There will be a total of 4 exams in this course. No notes/homework/textbooks will be allowed on ANY exam. All exams are expected to be completed in the allotted class time, no exceptions. No exam grades will be dropped. However, ***if your final exam grade is higher than your lowest test grade, then it will replace your lowest test grade at the end of the course if you have fewer than 3 absences.*** Exam corrections are for your own learning well-being and will not be graded but are expected to be completed after each exam is returned. Exam grades are not posted online anywhere. You will get all of your exams back. It is in your best interest to save ALL graded documents until your final grade is assigned at the end of the term. If you do not take the final exam, you will fail the class regardless of your average at the time of the final.

Bonus Tests: There are weekly bonus tests on Knewton. If you complete these tests, you can earn up to 5 percentage points added to your final grade. These tests are optional but they are timed and they do expire at the end of each week. The average of your bonus test scores will determine the number of points added to your final average (i.e. If you average 80% on the bonus tests, then you will be awarded $80(0.05) = 4$ points to your final average.) Any bonus test you skip will be scored as a 0.

Late work: Late work is not accepted. If you do not turn in an assignment on time, you will receive a zero.

Class Notes: The class notes (outline) will be posted on Blackboard for you to print or you can purchase them from the book store for \$20. It is the responsibility of the student to bring the notes to class everyday. Be sure to look at the tentative calendar to see what sections we will cover next.

Calculators: There will be times throughout the year when students will need a graphing calculator to complete an assignment. This course is taught under the assumption that each student owns a graphing calculator. I recommend a TI 84 series calculator.

Academic Integrity: Academic dishonesty will not be tolerated. You are expected to uphold the ideas of academic honesty. 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. If you are caught cheating on any assignment, you will not be allowed to take another class with me in the future.

Class Rules:

- Be courteous and respectful at all times.
- Be on time and ready to learn.
- Keep your hands and feet to yourself.
- Use only pencil for all assignments.
- No food or drinks in class other than bottled water.
- Students are not permitted to use electronic devices, other than a calculator, in class. **Put the cell phones away!!**
- Adhere to the requirements of the Student Code of Conduct.

Core Objectives:

This course satisfies the following Core Objectives:

Communication Skills:

- Develop, interpret, and express ideas through written communication
- Develop, interpret, and express ideas through oral communication
- Develop, interpret, and express ideas through visual communication

Critical Thinking:

- Generate and communicate ideas by combining, changing, and reapplying existing information
- Gather and assess information relevant to a question
- Analyze, evaluate, and synthesize information

Empirical and Quantitative Competency Skills:

- Manipulate and analyze numerical data and arrive at an informed conclusion
- Manipulate and analyze observable facts and arrive at an informed conclusion

Equal Opportunity: 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.

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 Special Services Office at South Plains College 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 Special Services Coordinator. You must also talk directly to your instructor to inform her of your requests. This conversation must happen within the first two weeks of classes.

Campus Concealed Carry:

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, please refer to the SPC policy at: http://www.southplainscollege.edu/human_resources/policy_procedure/hhc.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.

Disclaimer

The instructor reserves the right to alter any class policies as deemed necessary by the instructor or South Plains College, and will announce any changes in class. If a student has any questions about a change in policy ask the instructor for clarification.

| Tentative Calendar for Math 1324 | | | |
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| Day | Date | Topic | Sections |
| Tuesday | Aug 28 | Introduction/Linear Equations and Models | 2.1 – 2.3 (start) |
| Thursday | Aug 30 | Linear Models/Linear Inequalities | 2.1 – 2.3 (finish) 2.4 |
| Tuesday | Sept 4 | Functions/Graphs of Functions | 3.1, 3.2 |
| Thursday | Sept 6 | Applications of Linear Functions | 3.3 |
| Tuesday | Sept 11 | Quadratic Functions and Applications | 3.4 |
| Thursday | Sept 13 | Polynomial Functions/Rational Functions | 3.5, 3.6 |
| Tuesday | Sept 18 | Exponential Functions and Properties Review for Exam 1 | 4.1, 4.2 |
| Thursday | Sept 20 | Exam 1 | Ch. 2, 3 |
| Tuesday | Sept 25 | Logarithmic Functions/Logarithmic and Exponential Applications | 4.3 – 4.4 (start) |
| Thursday | Sept 27 | Logarithmic and Exponential Applications | 4.4 (finish) |
| Tuesday | Oct 2 | Simple Interest, Compound Interest | 5.1 – 5.2 |
| Thursday | Oct 4 | Annuities | 5.3 – 5.4 (start) |
| Tuesday | Oct 9 | Future Value of an Annuity/Present Value of an Annuity | 5.3 – 5.4 (finish) |
| Thursday | Oct 11 | Systems of Linear Equations | 6.1 |
| Tuesday | Oct 16 | Exam 2 | Ch. 4, 5 |
| Thursday | Oct 18 | Gauss-Jordan Elimination/Applications of Systems | 6.2, 6.3 |
| Tuesday | Oct 23 | Matrix Operations, Inverses, and Input-Output Analysis | 6.5, 6.6 |
| Thursday | Oct 25 | Graphing Linear Inequalities/Linear Programming Intro | 7.1 – 7.3 (start) |
| Tuesday | Oct 30 | Linear Programming: Graphical Method with Applications | 7.1 – 7.3 (finish) |
| Thursday | Nov 1 | Linear Programming: Simplex Method (Maximization) | 7.4 (start) |
| Tuesday | Nov 6 | Exam 3 | Ch. 6, 7.1 – 7.3 |
| Thursday | Nov 8 | Linear Programming: Simplex Method (Maximization) Linear Programming: Applications of Simplex Maximization | 7.4 (finish) 7.5 (start) |
| Tuesday | Nov 13 | Linear Programming: Simplex Method Maximization Applications | 7.5 (finish) |
| Thursday | Nov 15 | Last Day to Drop Linear Programming: Simplex Method (Duality and Minimization) | 7.6 |
| Tuesday | Nov 20 | Linear Programming: Simplex Method (Nonstandard) | 7.7 |
| Thursday | Nov 22 | Thanksgiving Break | |
| Tuesday | Nov 27 | Introduction to Probability; Expected Value | 8.3, 9.1 |
| Thursday | Nov 29 | Review | |
| Tuesday | Dec 4 | Exam 4 | Ch. 7.4 - 7.7, 8.3, 9.1 |
| Thursday | Dec 6 | Review | |
| Tuesday | Dec 10 - 13 | Final Exam exact date to be announced | |