# Math 0324/1324.C602 Math for Business and Social Sciences (CoReq) Tuesdays and Thursdays 9am – 10:45am Fall 2022 Room – B031

Instructor: Mrs. Morgan Groves Email: mgroves@southplainscollege.edu Office: B017 Office Phone: 716-2735 Office Hours: MW 1pm - 2:30pm

TR 11am – 12pm F 9am – 12pm (or by appointment)

#### **Course Structure**

- Flipped course
  - Watch lecture video (Blackboard) and fill in notes **before** class each day.
  - Students provide questions in class to discuss and solidify topics over the lesson(s).
  - Homework is to be attempted before class, but will not be due that same day.
  - Assessments, such as labs, quizzes, and exams, will all be done in class.
  - All students are expected to be physically in class unless given explicit permission to be virtual.

#### Textbook

• No book for this section.

#### **Course Requirements/Materials**

- Attend all classes with notes and homework done in advance.
- All graded assessments assigned in class are expected to be completed in the allotted class time, unless otherwise instructed by the professor.
- Reliable internet access
- Printer (for notes), but notes can be done electronically (tablet/iPad) as long as they are written by hand
- Smart phone and/or scanner to turn a written document into a PDF file

| Grading Policy (1324):       | Grading Scale (1324): |  |  |
|------------------------------|-----------------------|--|--|
| Daily Participation 5%       | 90-100% A             |  |  |
| Labs 10%                     | 80-89% B              |  |  |
| Quizzes 15%                  | 70-79% C              |  |  |
| Exams 50%                    | 60-69% D              |  |  |
| Comprehensive Final Exam 20% | Below 60% F           |  |  |

#### The MATH 0324 final grade is at the discretion of the instructor and is only a Pass/Fail grade.

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

#### **Class Notes**

- Found on Blackboard under Course Content.
- Should be completed by each student (hand-written) using lecture videos provided on Blackboard.
- Submit a single PDF file, in proper order, of the completed notes to Blackboard before each class meeting starts.
- Bring all notes to class each day (2-3 in binder recommended)

### Lecture Videos

- Found on Blackboard under Course Content.
- Watch and fill in the notes, pausing often to allow for processing time.
- Organize your questions to bring to class the next day.

#### Homework

- Written assignments
- Bonus points for next exam (1 completed HW assignment = 1 bonus point on next exam)
- Use your own paper
- Must be done by hand (no typing)
- Show all work to receive credit!!
- Must be your own work!
- Answers found on Blackboard
- Please clean up the papers (no spiral shreds)
- Turn in by due date found on the Tentative Calendar at end of syllabus.
- Using PhotoMath (or similar) is strictly prohibited and will result in academic dishonestly reports being submitted to your permanent record.

#### Labs

- Daily, as time allows
- Can use notes
- If notes were not done before class and/or were not brought to class, the student forfeits the right to ask for help on the lab assignment that day.
- Complete in allotted class time.

#### Quizzes

- 3x5 hand-written (by student) note card allowed
- Completed before the end of the class that day

#### Tests

- 5 midterm exams and 1 comprehensive final exam
- No notes/homework/textbooks will be allowed on ANY exam
- Complete in the allotted class time
- No exam grades will be dropped.
- It is in your best interest to save ALL graded documents until your final grade is assigned at the end of the term.
- Exams <u>may</u> be comprehensive.

#### Final Exam

- The final exam is comprehensive.
- Any student who does not take the final exam will fail the classes with F's regardless of the student's average.
- No make-up final exam will be offered.
- The final exam will be held on **Tuesday**, **December 13<sup>th</sup>** from **8am to 10am**.
- More details will be shared on Blackboard near the end of the term.

#### Late work

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

### Make-up

- Make-up work is given at the discretion of the instructor.
- NO make-up labs, quizzes, or tests are given without <u>prior notification AND proper</u> <u>documentation.</u>
- If you are absent from class, have given prior notification and proper documentation of your absence, you MUST make arrangements to take the lab, quiz, or exam BEFORE the next class period.
- Students who do not take labs, quizzes, or exams in-class, early or late, forfeit the right to attempt any extra credit on that quiz or exam.

# **Attendance Policy**

- Students are 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 <u>may</u> remove the student from the class with an X, upon their discretion.
- Unless given specific permission, students are expected to be in the class room and on time for class each class day.
- <u>There are no excused absences</u>, even with a doctor's note.
- Any student who arrives more than 10 minutes late or leaves early without permission will be counted tardy and 25% of their participation grade that day will be deducted.
- Any student who falls asleep during class or who leaves class for an extended period of time, as determined by the instructor, will have 25% or more of their participation grade deducted for that day.

# **Participation Grade**

- Daily participation grade.
- This grade is 50% attendance to/participation in class and the remaining 50% is awarded for watching the lecture video(s) prior to class and filling in the lecture notes.
- If the student does not come to class prepared (with notes), then that student forfeits the right to ask for assistance from the instructor and other students on any assignments or class lectures that day.
- In the event you are absent during class, you will get 0 pts for the Attendance/Promptness portion of this grade for that day.

|                       | Unacceptable<br>0 points   | Acceptable<br>0.25 points  | Exemplary<br>0.50 points   | Score |
|-----------------------|--|--|--|-------|
| Attendance/Promptness | The student is absent  | The student is more<br>than 10 minutes late<br>to class  | The student is on time<br>for class  |       |
| Preparedness          | The student did<br>not complete any<br>lecture examples<br>from the assigned<br>videos | The student<br>completed only a<br>portion of the lecture<br>examples completed<br>on the assigned<br>videos | The student<br>completed <b>all</b> lecture<br>examples in the<br>lecture material |       |
|                       |  | -  | Total Score<br>Max = 1 point (100%)  |       |

# **Class Participation**

# **Submitting Documents Online**

- A single PDF file that is clear and legible should be created and uploaded to Blackboard.
- The document should be in proper order (problem 1, problem 2, etc.).
- Students are allowed to use whatever hardware/software they desire to create the PDF files, but here are a few suggestions:
  - App: GeniusScan need a Google email to do this for free

App: **CamScanner** – limit on number of pages that can be compiles on the free version Apple Phone – has a program on it already that will compile pictures into PDF files

- It is the student's responsibility to ensure the document is legible and in the correct format.
- Any assignment not submitted in the correct format will be given a 0 on the assignment.
- Assignments should be uploaded to Blackboard and not e-mailed to the instructor.

# Academic Integrity

- Any student involved in cheating will receive a zero on the assignment(s) and will be informed of why he/she received a zero.
- In the event of a second offense, guilty students will be dropped from the course with an F and an academic dishonesty report will be filed against the student, which goes on the student's permanent school record.

# Calculators

- This course is taught under the assumption that each student owns a graphing calculator.
- I recommend a TI 84 series calculator.
- TI-Nspires are NOT recommended unless you are an expert at using them, as the instructor will be of little help.

#### **Class Rules:**

- Be on time and ready to learn.
- Use only pencil for all assignments.
- Students are not permitted to use electronic devices, other than a calculator, in class. **Put the cell phones away!!**
- During testing, all cell phones should be placed on SILENT or turned off, and all smart watches need to be removed and placed on the floor face-down to the left of your seat.
- Any student who leaves the classroom for any reason (bathroom, phone call, etc.) during an exam will not be allowed to continue the exam upon their return. Once you leave the classroom during an exam, you are done.
- Adhere to the requirements of the Student Code of Conduct.
- If you are joining the class through virtual means, please keep your microphone on mute until you have a question.

#### **Virtual Students**

- Stay active and attentive during the entire class.
- Camera on and positioned in such a way as to allow the camera to catch both your face and your workspace.
- Keep your camera on until you have explicit permission from your instructor to turn it off.
- Students are expected to follow the same testing/quizzes/lab rules as any student in class.
- If you leave the view of the camera during an assessment without explicit permission from the instructor, you will be given a 0 on the assessment.
- Keep chat windows open during assessments as a way for the instructor to communicate (quietly) with you.
  - If the student does not keep their chat window visible to themselves during assessments and misses a message from the instructor, 15% credit may be deducted from that assignment's score.

- If you break any of the rules listed above, you will receive a 0 on the assessment.
- Students who are virtual for an assessment have been given explicit permission by the
  instructor to take the assessment in this format. If you are not given this permission, you are
  expected to be in class for each and every assessment (labs, quizzes, tests). Instructor
  permission is not given lightly nor liberally and the decision to allow a student to work virtually is
  entirely at the instructor's discretion.

#### South Plains College Common Course Syllabus: MATH 0324/1324 Fall 2022

Department: Mathematics, Engineering, and Computer Science

**Discipline:** Mathematics

Course Number: MATH 0324/1324

Course Title: Mathematics for Business and Social Sciences with Support Course

Available Formats: conventional/flex

Campuses: Levelland and Reese

**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. Math 1324: 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.

**Prerequisite:** Minimum score of 340 on the TSIA, or a successful completion with a grade of 'C' or better in MATH 0315.

Credit: 3/3 Lecture: 3/3 Lab: 1

Supplies: Please see the instructor's course information sheet for specific supplies.

**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:

- 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 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 <u>may</u> remove the student from the class with an X, upon their discretion, to help the student from harming their GPA.

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 Statement:** If you are experiencing any of the following symptoms, please do not attend class and either seek medical attention or test 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. Proof of a positive test is required. A home test is sufficient but students must submit a photo of the positive result. The date of test must be written on the test result and an ID included in the photo. If tested elsewhere (clinic, pharmacy, etc.), please submit a

copy of the doctor's note or email notification. Results may be emailed to DeEtte Edens, BSN, RN at dedens@southplainscollege.edu.

A student is clear to return to class without further assessment from DeEtte Edens, BSN, RN if they have completed the 5-day isolation period, symptoms have improved, and they are without fever for 24 hours without the use of fever-reducing medication.

Students must communicate with DeEtte Edens, BSN, RN prior to their return date if still symptomatic at the end of the 5-day isolation.

**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 difference 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, Lubbock Centers (located at the Lubbock Downtown Center) 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 Health and Wellness Center. 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 Health and Wellness Center at 806-716-2529 or email <u>dburleson@southplainscollege.edu</u> 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: <a href="http://www.southplainscollege.edu/campuscarry.php">http://www.southplainscollege.edu/campuscarry.php</a>

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.

|      | Tentative Calendar for Math 0324/1324 Fall 2022 |         |   |  |  |  |
|------|---|---------|---|--|--|--|
| Week | Day   | Date    | Торіс   | Homework                               |  |  |
|      | Tuesday   | Aug 30  | Syllabus and Introduction   |  |  |  |
| 1    | Thursday  | Sept 1  | 1.1 – 1.2: Foundations by Hand; Integer Rules, Fraction<br>Multiplication and Division                    | 1.1 & 1.2<br>Due Sept 6 <sup>th</sup>  |  |  |
| 2    | Tuesday   | Sept 6  | 1.3 – 1.4: Fraction Addition & Subtraction, Order of<br>Operations; Exponent Rules & Radicals             | 1.3 & 1.4<br>Due Sept 8 <sup>th</sup>  |  |  |
|      | Thursday  | Sept 8  | 1.5: Like Terms; Multiplying Polynomials  | 1.5<br>Due Sept 13 <sup>th</sup>       |  |  |
| 3    | Tuesday   | Sept 13 | 1.6 – 1.7: Solving Linear & Absolute Value Equations;<br>Linear Inequalities; Graphs & Equations of Lines | 1.6 & 1.7<br>Due Sept 15 <sup>th</sup> |  |  |
| 5    | Thursday  | Sept 15 | 1.8. – 1.9: Functions; Linear Business Applications   | 1.8 – 1.9<br>Due Sept 20 <sup>th</sup> |  |  |
|      | Tuesday   | Sept 20 | Exam 1  |  |  |  |
| 4    | Thursday  | Sept 22 | 2.1 – 2.2: Factoring Polynomials; Solving Quadratic<br>Equations  | 2.1 – 2.2<br>Due Sept 27 <sup>th</sup> |  |  |
| 5    | Tuesday   | Sept 27 | 2.3: Quadratic Functions and Applications   | 2.3<br>Due Sept 29 <sup>th</sup>       |  |  |
| 5    | Thursday  | Sept 29 | 2.4: Polynomial Functions   | 2.4<br>Due Oct 4 <sup>th</sup>         |  |  |
| 0    | Tuesday   | Oct 4   | Exam 2  |  |  |  |
| 6    | Thursday  | Oct 6   | 3.1: Simplifying Rational Expressions;  | 3.1<br>Due Oct 11 <sup>th</sup>        |  |  |
| 7    | Tuesday   | Oct 11  | 3.2: Solving Rational Equations   | 3.2<br>Due Oct 13 <sup>th</sup>        |  |  |
| 1    | Thursday  | Oct 13  | 3.3: Rational Functions   | 3.3<br>Due Oct 18 <sup>th</sup>        |  |  |
|      | Tuesday   | Oct 18  | Exam 3  |  |  |  |
| 8    | Thursday  | Oct 20  | 4.1 – 4.2: Systems of Linear Equations; Applications of GJE   | 4.1 – 4.2<br>Due Oct 25 <sup>th</sup>  |  |  |
| 9    | Tuesday   | Oct 25  | 4.3: Input-Output Models  | 4.3<br>Due Oct 27 <sup>th</sup>        |  |  |
| 9    | Thursday  | Oct 27  | 4.4: Linear Programming Graphical Method  | 4.4<br>Due Nov 1 <sup>st</sup>         |  |  |
| 10   | Tuesday   | Nov 1   | 4.5: Linear Programming Simplex Method  | 4.5<br>Due Nov 3 <sup>rd</sup>         |  |  |
| 10   | Thursday  | Nov 3   | 4.6: Linear Programming Two-Phase Method  | 4.6<br>Due Nov 8 <sup>th</sup>         |  |  |
|      | Tuesday   | Nov 8   | Exam 4  |  |  |  |
| 11   | Thursday  | Nov 10  | 5.1: Exponential Functions & Applications   | 5.1<br>Due Nov 15 <sup>th</sup>        |  |  |
| 12   | Tuesday   | Nov 15  | 5.2: Logarithmic Functions & Applications   | 5.2<br>Due Nov 17 <sup>th</sup>        |  |  |
| 12   | Thursday  | Nov 17  | 5.3: Simple & Compound Interest   | 5.3<br>Due Nov 22 <sup>nd</sup>        |  |  |
| 13   | Tuesday   | Nov 22  | 5.4: Annuities  | 5.4<br>Due Nov 29 <sup>th</sup>        |  |  |
| _    | Thursday  | Nov 24  | Thanksgiving Break  |  |  |  |
| 14   | Tuesday   | Nov 29  | 6.1: Probability, Expected Value, and Markov Chains   | 6.1<br>Due Dec 1 <sup>st</sup>         |  |  |
|      | Thursday  | Dec 1   | Review  |  |  |  |
| 15   | Tuesday   | Dec 6   | Exam 5  |  |  |  |

|       | Thursday | Dec 8  | Review     |               |
|-------|----------|--------|------------|---------------|
| 16    | Tuesday  | Dec 13 | Final Exam | Comprehensive |
|       |          |        |            |               |
| · · · |          |        | Act        |               |

Last day to drop – December 1<sup>st</sup>