(Revised 01/11/2024)

Course Instructor: Tom Johnson

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Course Title: MATH 0332/1332-C501, Contemporary Math

**Course Description:** Intended for Non STEM (Science, Technology, Engineering, and Mathematics) majors. Topics include introductory treatments of sets and logic, financial mathematics, probability and statistics with appropriate applications. Number sense, proportional reasoning, estimation, technology, and communication should be embedded throughout the course. Additional topics may be covered.

This course partially satisfies a Core Curriculum Requirement: Mathematics Foundational Component Area (020)

**Prerequisite:** Minimum score of 350 on the TSIA, TSI-exempt status, or a successful completion with a grade of 'C' or better in MATH 0337.

Credit: 3 Lecture: 3 Lab: 0

#### **Textbook:**

Kirk, D.; *Contemporary Mathematics*; openstax.org; Rice University; Houston, TX; Digital Version ISBN-13: 978-1-951693-68-8.

#### **Core Curriculum Objectives Addressed:**

- 1. Communication Skills: to include effective written, oral and visual communication.
- 2. Critical Thinking Skills: to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
- 3. Empirical and Quantitative Competency Skills: to manipulate and analyze numerical data or observable facts resulting in informed conclusions.

#### **Student Learning Outcomes:**

Upon successful (passing) completion of this course, the student will be able to:

- 1. Apply the language and notation of sets.
- 2. Determine the validity of an argument or statement and provide mathematical evidence.
- 3. Solve problems in mathematics of finance.
- 4. Demonstrate fundamental probability/counting techniques and apply those techniques to solve problems.
- 5. Interpret and analyze various representations of data.
- 6. Demonstrate the ability to choose and analyze mathematical models to solve problems from real-world settings, including, but not limited to, personal finance, health literacy, and civic engagement.

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**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:** Homework (40% of overall grade) will be assigned after each lecture. Unit Exams (40% of overall grade) will be given periodically. There will be a Final Exam (20% of overall grade) given by all instructors.

**Attendance Policy:** Attendance and effort are the most important activities for success in this course. The instructor maintains records of the student's engagement throughout the semester. As a Face-to-Face course, the student should attend at least 75% of the course in the classroom. Should absences exceed 25%, the instructor has the right to drop the student with a grade of F or an X, depending on the instructor's discretion. Extenuating circumstances will be considered.

**COVID-19 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
- If you test Positive (+) for Covid-19
  - o Five days isolation
  - O You may return if:
    - No fever in last 24 hrs.
    - Covid symptoms are improving. (Some may persist, ie. Loss of taste)

Please also notify DeEtte Edens, BSN, RN, Associate Director of Health & Wellness, at dedens@southplainscollege.edu or 806-716-2376.

**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.

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**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) 806716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

**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.

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.

# South Plains College – Plainview Center MATH 0332/1332-C501 Syllabus (Revised 01/11/2024)

**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 806716-2360.

**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 <u>activate</u> 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 <u>email cgilster@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.

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Week 01: 01/16 - 01/19

- 1. <u>1.1 Basic Set Concepts</u>
- 2. 1.2 Subsets
- 3. 1.3 Understanding Venn Diagrams

Week 02: 01/22 - 01/26

- 1. 3.4 Rational Numbers
- 2. <u>3.5 Irrational Numbers</u>
- 3. 3.9 Scientific Notation

Week 03: 01/29 - 02/02

- 1. 5.2 Linear Equations in One Variable with Applications
- 2. 5.4 Ratios and Proportions
- 3. <u>5.5 Graphing Linear Equations and Inequalities</u>

Week 04: 02/05 - 02/09

- 1. 5.6 Quadratic Equations with Two Variables with Applications
- 2. 5.7 Functions
- 3. <u>5.8 Graphing Functions</u>
- 4. 5.9 Systems of Linear Equations in Two Variables

Week 05: 02/12 - 02/16

- 1. <u>6.3 Simple Interest</u>
- 2. 6.4 Compound Interest

Week 06: 02/19 – 02/23

- 1. <u>6.7 Investments</u>
- 2. <u>6.11 Buying or Leasing a Car</u>

Week 07: 02/26 - 03/01

- 1. 7.1 The Multiplication Rule for Counting
- 2. 7.2 Permutations
- 3. 7.3 Combinations

Week 08: 03/04 - 03/08

- 1. 7.5 Basic Concepts of Probability
- 2. 7.6 Probability with Permutations and Combinations
- 3. 7.7 What Are the Odds?

Spring Break: 03/11 - 03/15.

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Week 09: 03/18 – 03/22

- 1. 7.8 The Addition Rule for Probability
- 2. 7.9 Conditional Probability and the Multiplication Rule
- 3. 7.11 Expected Value

Week 10: 03/25 - 03/29

- 1. 8.1 Gathering and Organizing Data
- 2. <u>8.2 Visualizing Data</u>
- 3. 8.3 Mean, Median and Mode

Week 11: 04/01 - 04/05

- 1. <u>10.3 Triangles</u>
- 2. 10.4 Polygons, Perimeter, and Circumference
- 3. <u>10.6 Area</u>

Week 12: 04/08 - 04/12

- 1. 10.7 Volume and Surface Area
- 2. 10.8 Right Triangle Trigonometry

Week 13: 04/15 – 04/19

Week 14: 04/22 - 04/26

Week 15: 04/29 – 05/03 Review

Final Exam Week: 05/06 - 05/09 FINAL EXAM