

Spring 2021 - MATH 0337-271 – Foundations of Mathematical Reasoning

INSTRUCTOR: Ms. Jody Dean, B.S., M.S.

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OFFICE HOURS: Monday & Wednesday 100 – 300,
Tuesday & Thursday 1100 – 1245,
Friday 900 – 1200 — by appointment **and almost any time by appointment**

Course Description: This is a literacy-based course designed to provide students with the skills and conceptual understanding to succeed in a college-level statistics (Math1342) or quantitative literacy course (Math1332). This course includes applications of fundamental algebra, geometry, and statistics. **This developmental math course is NOT designed for those students who need to take Math1314 or Math1324 as part of their degree plan.** Students with undeclared majors should take Math0315 or Math0320, depending on their placement score. This course carries institutional credit but will not transfer and will not satisfy graduation requirements.

Supplies: *Access to a computer with an internet connection and a webcam is required for this course.*

Pencils, paper, straightedge, and graph paper. Only a basic non-graphing calculator (such as a TI-30) will be allowed in class. Graphing calculators and calculators on cell phones or other electronic devices will NOT be allowed during tests or in-class assignments. Calculators may not be allowed on certain assignments and/or portions of exams. No textbook is required for Math0337.

Learning Outcomes:

- 1. Numeracy:** Students will develop number sense and the ability to apply concepts of numeracy to investigate and describe quantitative relationships and solve real-world problems in a variety of contexts.
- 2. Proportional Reasoning:** Students will use proportional reasoning to solve problems that require ratios, rates, proportions, and scaling.
- 3. Algebraic Competence, Reasoning, and Modeling:** Students will transition from specific and numeric to general and abstract reasoning using the language and structure of algebra to investigate, represent, and solve problems.
- 4. Assessing Risk (Probabilistic Reasoning):** Students will understand and critically evaluate statements involving risk and arguments based on probability that appear in the popular media, especially in presenting medical information.
- 5. Personal Finance:** Students will understand, interpret and make decisions based on financial information that is commonly presented to consumers.
- 6. Civic Life:** Students will understand that quantitative information presented in the media and by other entities can sometimes be useful and sometimes be misleading.

Learning Goals: This course is a quantitative reasoning course. This means you will learn to use, understand, and communicate about quantitative information. This course has 5 goals:

- 1. Communication goal:** Interpret and communicate quantitative information and mathematical and statistical concepts using language appropriate to the context and intended audience.
- 2. Problem solving goal:** Make sense of problems, develop strategies to find solutions, and persevere in solving them.
- 3. Reasoning goal:** Reason, model, and make decisions with mathematical, statistical, and quantitative information.
- 4. Evaluation goal:** Critique and evaluate quantitative arguments that utilize mathematical, statistical, and quantitative information.
- 5. Technology goal:** Use appropriate technology in a given context.

Assignments: All assignments will be submitted over Blackboard to reduce the number of papers having to be exchanged. At the end of each class meeting there will be a short assignment that will be due before you leave, or at times the next day. There will also be homework assigned that will be due at the beginning of the next class meeting. **I do not accept late assignments under any circumstances.** On all assignments, all steps/work must be shown and the answer clearly indicated to receive credit. Do not submit “answer sheets.”

Something to note, my standard policy is **NO NAME = NO GRADE**. Similarly, **HALF THE NAME = HALF THE GRADE**. There are no exceptions to this rule.

EXAMINATIONS: There will be **3** major exams. Correct the exams as they are returned in partial preparation for the final exam. Exams **MAY NOT** be made up. If you are absent on the day an exam is given, you will receive a grade of zero for that exam. If you contact me **BEFORE** the exam, at the discretion of the instructor, the final exam grade **may** be used to replace one zero for a missed exam. This is **ONLY** if you have contacted me before the exam. Subsequent zeros will stand. ***There is no such thing as missing the final exam.***

Exam Dates: Exam 1 – Tuesday February 8

Exam 2 – Tuesday March 8

Exam 3 – Tuesday April 13

Final Exam – Tuesday May 11, 5:30 – 7:30

EXAM ETIQUETTE: During exams there will be no talking. All electronic devices must be silenced and put away, with the exception of calculators. No cell phones may be used during exams. Once the first person turns in an exam, no one else may start. If you come in after that point, you will not be allowed to take the exam and you will receive a zero for that exam. Therefore, it is extremely important that you be on time. No one may leave the room and come back during an exam.

GRADING: Your grade will be calculated as follows. A test average (TA) will be found by averaging all the exam grades with the final exam counting twice. Then, the test average will be averaged with your homework/lab average to give your overall average. That is:

$(\text{Exam 1} + \text{Exam 2} + \text{Exam 3} + 2 * \text{Final Exam}) / 5 = \text{TA}$

$(\text{TA} + \text{HW}) / 2 = \text{Overall Average}$.

There are **NO MAKE-UP** exams, quizzes or classroom exercises. Final grades will be assigned on the following scale: **A** 90%-100%; **B** 80%-89%; **C** 70%-79%; **D** 60%-69%; **F** below 60%

This course and its grade will be recorded on your official transcript.

ATTENDANCE You have the option to attend class in person on campus or to attend class virtually on Zoom at class time. (This may change at some point to BlackBoard Collaborate. But we'll start with Zoom.) Either way of attendance is acceptable, but ***you must attend class.***

Attendance and effort are the most important activities for success in this course. If you are absent, you, alone, are responsible for getting the notes and doing your assignment before the next class. If you decide to stop coming to class, you must go through the drop procedure. If you stop attending or miss *five* classes you may be dropped with a grade of F at the discretion of the instructor. Please talk with me to verify if you have successfully dropped the course. Please read the "Drops and Withdrawals" policies on page 21 in the current catalog. Attendance will be checked in each class meeting via a sign-in sheet. It is your responsibility to make sure that you sign in each class. Do not call or email me later to tell me that you forgot to sign in. That is your responsibility, not mine. Your number of absences will be calculated by the number of times you do not sign in. Therefore, you have a lot to lose if you do not.

With all that being said, because of COVID-19 adjustments have to be made. Any exceptions to these policies, although extremely rare, will be considered on a case by case basis.

ACADEMIC HONESTY: While working on homework, students are allowed and even encouraged to work together. In this situation, two or more heads are almost always better than one. However, exams are a different matter entirely. Each student is expected to work alone and with only the tools allowed for the exam. Any student caught cheating on an exam will receive a zero on that exam and may receive an F for the course. There will be no exceptions to this rule.

CLASSROOM BEHAVIOR: Be aware that class is over when I dismiss it, and not before. Any student who repeatedly disrupts my class will be asked to leave. Some of the things that I consider “disruptions” include, but are not limited to, packing your things before the end of class, ringing cell phones, talking while I am talking, making a late “entrance”, and so on. Texting while in class is also a disruption. **No tobacco products of any kind may be used at any time during class.** Chronic offenders will be banned from the classroom. It is phenomenally difficult to pass my class if you cannot attend on test days.
Do NOT use texting abbreviations in any correspondence with me.

COMMENTS:

This is a college course. To succeed in my course, you will need to understand that the burden for learning is yours, and yours alone. No one should care more about your education than you. No one should work harder in this class than you. I am not primarily responsible for working hard to make sure you understand the material. You are! You are responsible for your assignments, lecture material, obtaining help on material you do not understand, preparing for exams and showing up to class to hear all relevant scheduling changes. I am responsible for teaching the material which meets the objectives listed in this syllabus, being available for questions during class and in office hours, and assessing your understanding of the material in this course fairly and impartially. I am here as a willing and able resource in your educational career. It is up to you how you make use of that resource.

Occasionally, or possibly every day, you will find the opportunity to be offended by something I say, do, joke about, or make light of. You may be offended by the way I dress, my personality, the way I structure this course, or my sense of humor. I teach my course my way without concern for the myriad ways I could be offending you by being myself. If you are a person who gets offended easily and enjoys using that as a crutch to prop up your delicate ego or to excuse your inability to understand the material, then I could be the wrong professor for you. I do not set out to offend you. I set out to teach you the math objectives in this course.

Covid-19 Statement: It is the policy of South Plains College for the Spring 2021 semester 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. Such behaviors specifically include the requirement that all students properly wear CDC-compliant face coverings while in SPC buildings including in classrooms, labs, hallways, and restrooms. Failure to comply with this policy may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Dean of Students on the Levelland campus or the Dean/Director of external centers for Student Code of Conduct Violation. Students who believe they have been exposed or may be COVID-19 positive, must contact Health Services, DeEtte Edens, BSN, RN at (806) 716-2376 or dedens@southplainscollege.edu.

4.1.1.1. 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.

4.1.1.2. Disabilities 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.

4.1.1.3. Non-Discrimination Statement

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.

4.1.1.4 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 Crystal Gilster, Director of Health and Wellness at 806-716-2362 or email cgilster@southplainscollege.edu for assistance.

4.1.1.5 OPTIONAL STATEMENT - Campus Concealed Carry Statement

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: <https://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.

Tentative Course Calendar

Week 1: Introduction
Addition & Subtraction of Integers
Multiplication & Division of Integers and Fractions

Week 2: Addition & Subtraction of Fractions
Order of Operations

Week 3: Solving Linear Equations
Direct Translation Application Problems

Week 4: Rectangular Coordinate System & Slope
Graphing Linear Equations

Week 5: Review
Exam 1

Week 6: Systems of Linear Equations
Operations with Monomials

Week 7: Operations with Polynomials
Radicals

Week 8: Review
Exam 2

Week 9: Spring Break

Week 10: Solving Quadratic Equations
Metric System & Conversions

Week 11: Geometry Basics
Area

Week 12: Volume
Pythagorean Theorem

Week 13: Percentages & Applications
Statistical Concepts

Week 14: Review
Exam 3

Week 15: Graphs
Probability
Simply & Compound Interest

Week 16: Final Exam, Tuesday, May 11 5:30 – 7:30