RANGER COLLEGE

STEPHENVILLE, TEXAS

COURSE SYLLABUS

Contemporary Mathematics

MATH 1332

3 credit hours

Spring 2021

INSTRUCTOR:

Dr. Aria Dougherty

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PHONE: (254)267-7101
OFFICE: Admin 4
OFFICE HOURS: Monday / Wednesday   3:30 – 5:00
                          Tuesday / Thursday   3:00 – 5:00

I. Texas Core Curriculum Statement of Purpose

Through the Texas Core Curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world, develop principles of personal and social responsibility for living in a diverse world, and advance intellectual and practical skills that are essential for all learning.

II. Course Description

Intended for Non STEM (Science, Technology, Engineering, and Mathematics) majors. Topics include introductory treatments of sets and logic, number systems, number theory, relations, functions, financial mathematics, and 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. Credit 3 semester hours.

III. Required Background or Prerequisite

Two years of high school algebra and one year of high school geometry or a grade of C or better in DMAT 0323 or the equivalent. This course does not satisfy the math requirement for the Associate of Science Degree.

IV. Required Textbook and Course Materials

Miller, Heeren, Hornsby, Heeren; "Mathematical Ideas", Thirteenth Editon
ISBN: 9780321977076

Materials for this course will be provided electronically, but it does not hurt to have a physical copy of the textbook for your reference if you are a more kinesthetic learner.

V. Course Purpose

Courses in Mathematics focus on quantitative literacy in logic, patterns, and relationships. Courses involve the understanding of key mathematical concepts and the application of appropriate quantitative tools to everyday experience.

VI. Learning Outcomes

Upon successful completion of this course, students will:

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.

VII. Core Objectives

This course meets the following of the six Core Objectives established by Texas:

☒ **Critical Thinking Skills (CT) –** Creative thinking, innovation, inquiry, and analysis; evaluation and synthesis of information

☒ **Communication Skills (COM) –** effective development, interpretation and expression of ideas through written, oral, and visual communication

☒ **Empirical and Quantitative Skills (EQS) –** The manipulation and analysis of numerical data or observable facts resulting in informed conclusions

☒ **Teamwork (TW) –** The ability to consider different points of view and to work effectively with others to support a shared purpose or goal

☐ **Social Responsibility (SR) –** Intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities

☒ **Personal Responsibility (PR) –** The ability to connect choices, actions, and consequences to ethical decision-making

VIII. Methods of Instruction

The instructional delivery of this class is through ITV, it will meet twice weekly in person and attendance is counted on physical presence in the classroom. Students are expected to be in the classroom, there will be no Zoom link for learning at home unless Ranger college shifts to be online. Should Ranger shift, we will follow whatever protocol is established by the school. Students are expected to complete assignments online through Blackboard *and* Pearson.

There are regular quizzes and unit tests. These will typically occur at the end of each section (quizzes) and chapter (unit tests). Homework will be due at the end of each chapter.

IX. Methods of Assessment

Your total grade breakdown is as follows:

GRADED ITEM	PERCENT
Attendance	10
Homework (CT, COM, EQS, PR)	10
Quizzes / Unit Tests (CT, COM, EQS, PR)	10
Discussion Boards (CT, COM, EQS, TW, PR)	15
Research Project (CT, COM, EQS, PR)	15
Midterm (CT, COM, EQS, PR)	15
Final (CT, COM, EQS, PR)	25

Final grades are determined according to the following categories:

Grading scale: A = 90-100%   B = 80-89   C = 70-79   D = 60-69   F = Below 60

X. Course/Classroom Policies

Attendance & Participation: Attendance is counted for 10% of your final grade, as indicated above. **Students will be dropped from the course after 6 unexcused absences.** Participation goes hand-in-hand with attendance. You are expected to work on assignments given in class, complete the tasks and examples provided, use the time productively, and ask questions when you have them. A student physically present in class refusing to participate in an assigned task for the day will be marked absent for that day. Your attendance score per day is a perfect score if you are on time, half credit if you are late, and no credit if you have an unexcused absence.

Late Policy: Late homework will not be accepted for full credit if it is accepted at all. Automatically graded work (through Pearson) can be turned in through the end of the term at a 30% deduction to problems scored after the due date – there will be no exceptions to this rule. Quizzes and unit tests will not be accepted late at all. Make up assignments for anything else will be given on a case-by-case basis. Homework will not be opened up after the final due date at the end of the term.

I suggest not leaving your late work to chance – if you live somewhere with spotty internet, work on your homework *before* the date that it is due.

Quizzes / Unit Tests: You are always allowed a calculator on a quiz or unit test. The use of this calculator is not to circumvent the purpose of the problem, though. If the problem is asking you to convert a fraction to a decimal, for instance, you are still expected to show the work required for that problem and not to simply give the final answer. Quizzes and unit tests are designed to help you realize what material you have a strong grasp of before exams by creating an exam-like environment before you encounter the material on a real exam – please keep this in mind when you think about what to expect in quizzes.

Exams: There is a midterm and a final exam in this class worth 15% and 25% of your total grade, respectively. More details will be given about each when these exams approach (such as whether it is closed or open book / note, etc.). Unit tests are not formal exams, they are only differentiated from quizzes by being a collection of problems from an entire chapter.

Research Project: There is a research project due at the end of the term. It is a report to be completed individually and to be discussed with peers. Relevant information can be found on Blackboard, there is a presentation that goes with this project.

Academic Dishonesty: A student found to be cheating or copying on an exam, quiz, homework, or any other assignment will be given a grade of "0". Repeated acts of cheating may result in being dropped from the class with a resulting grade of "F" being given for the course overall.

In this vein, please note that cell phones are not permitted during a test. You may not use it as your calculator or for any other purposes.

Cell Phones / Technology: Please do not have these out in class, as they can distract from not only your own learning but the learning processes of everyone around you (we *all* find Facebook / Instagram / Twitter / etc. to be more interesting than math at the best of times). This does not mean you cannot bring your laptop to class – in fact, if you have questions about the online homework etc. then I would *encourage* you to bring your laptop / phone / tablet / etc. to class in case there is an opportunity to ask the question (in this case, have the question already open so that you don't have to turn your computer on and wait for it to load). Further, if there is extra time at the end of a given class, I might give you the opportunity to use a few minutes of time completing homework – you'll want to have access to it if that's the case (I will often try to structure lessons so that there will be time to do homework at the end).

In general, if I see technology out at an inappropriate time in class, I will ask once for it to be put away before marking you late for the day. An additional infraction and you will be marked absent. If you are receiving a call during class, please step outside to handle it.

Student Behavior: Students will behave as mature adults and exhibit proper classroom decorum. Students will not cause any distractions that might prevent other students from learning. Students that deviate from this policy will not be permitted to remain in class.

Bathrooms: You do not have to ask, quietly get up and leave without disturbing the class. We are all adults; I am not going to question you on why you're leaving unless it is *during* a proctored quiz or exam (at which point just ask).

Available Support Services: The Learning Resource Center has books, videos, and computer software that may be used as a supplement for this class. Tutors are also available (see counselor).

XI. Course Outline/Schedule

Week	Tuesday	Thursday
1/18 – 1/21	Class Introduction; 1.1	1.2
1/25 – 1/28	2.1 – 2.2	2.3 – 2.4
2/1 – 2/4	3.1	3.2
2/8 – 2/11	3.3 – 3.4	3.6
2/15 – 2/18	4.1	4.2
2/22 – 2/25	4.3	4.4
3/1 – 3/4	Midterm Review; Game Theory	MIDTERM
3/8 – 3/11	SPRING BREAK	SPRING BREAK
3/15 – 3/18	5.1 – 5.2	5.3
3/22 – 3/25	10.1	10.2
3/29 – 4/1	10.3 – 10.4	10.5
4/5 – 4/8	11.1	11.2
4/12 – 4/15	11.3	11.4 – 11.5
4/19 – 4/22	14.1	14.2
4/26 – 4/29	Project Presentations	Project Presentations
5/3 – 5/6	FINAL EXAMS	FINAL EXAMS

XII. Non-Discrimination Statement

Admissions, employment, and program policies of Ranger College are nondiscriminatory regarding race, creed, color, sex, age, disability, and national origin.

XIII. ADA Statement

Ranger College provides a variety of services for students with learning and/or physical disabilities. Students are responsible for making initial contact with the Ranger College Counselor, Gabe Lewis (glewis@rangercollege.edu). It is advisable to make this contact before or immediately after the semester begins.