



RANGER COLLEGE

COURSE SYLLABUS

College Algebra

MATH 1314

3 credit hours

[Semester]

INSTRUCTOR:

Rebecca Plowman

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HOURS: TBA

1. Texas Core Curriculum Statement of Purpose

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.

2. Course Description

Study of quadratics; polynomial, rational, exponential, and logarithmic functions; systems of equations; progressions; sequences and series; conic sections; and, matrices and determinants.

3. Required Background or Prerequisites

Two years of high school algebra or a C or better in DMAT 0323 or equivalent.

4. Required Textbook and Course Materials

Blitzer, College Algebra, An Early Functions Approach, 3rd Edition, Pearson Publishing

ISBN 9780321729644

MyMathLab Access Code, Pearson Publishing

Graphing calculator (TI – 83 or 84) strongly recommended

Multiple supplementary documents distributed via Blackboard including, but not limited to the following:

- o Fundamental Mathematics Vocabulary
- o Properties of the Field of Real Numbers
- o Strategy to Factor Algebraic Expressions
- o Strategy to Solve Verbal (word) Problems
- o General Analytic Techniques for Polynomial Graphs

5. Course Purpose

This course focuses on quantitative literacy in logic, patterns, and relationships. The course involves the understanding of key mathematical concepts and the application of appropriate quantitative tools to everyday experiences.

6. Learning Outcomes

Upon successful completion of this course, the student will:

- 1). Demonstrate and apply knowledge of properties of functions, Including domain and range, operations, compositions, and Inverses.
- 2). Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.
- 3). Apply graphing techniques.
- 4). Evaluate all roots of higher degree polynomial and rational functions.
- 5). Recognize, solve, and apply systems of linear equations using matrices.

7. Core Objectives

This course directly meets the following of the six Core Objectives:

- ⊗ **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.

8. **Methods of Instruction**

This is a multimedia class. Media may include informal lecture/demonstration, computer delivered homework and tutorials, Power Point units, Blackboard additives and handouts, group work, and classroom manipulatives.

9. **Methods of Assessment**

- **Quizzes (20%) (CT, COM, EQS, PR)**-There will be 3 – 5 short in-class quizzes which usually include verbal response items as well as typical numerical and algebraic problems. If you are absent the day of a quiz, you have only one week to come in and take the quiz.
- **MyMathLab Homework (15%) (CT, COM, EQS, PR)**- MyMathLab is an online homework system. Assignments will be assigned after material is covered in class. The overall grade you receive on the homework will be the your homework grade.
This will require you to purchase a code through the bookstore or through Pearson when creating an account. (Codes can be purchased cheaper through Amazon or other sites, however you must be careful and see that you order the correct code. Some students have discovered cheaper apps aswell.) To create your MyMathLab account, you must access MyMathLab through your course on Blackboard.
- **Major Exams (40%) (CT, COM, EQS, PR)**-There will be 2 or 3 class period length exams, each covering multiple chapters from the textbook. If you are absent the day of a exam, you have only one week to come in and take the exam.
- **Final Exam (25%) (CT, COM, EQS, PR)**-This exam will be comprehensive departmental final over the entire course content.

Grading Scale: A=90–100% B=80–89% C=70–79% D=60–69% F<60%

10. **Classroom Policies/procedures**

- Regular and punctual attendance in all classes is considered essential

for optimum academic success.

- Students are expected to be seated by the beginning of the class.
- If a student has the equivalence of three weeks of unofficial absences the student may be dropped from the class with a grade of F (Ranger College General Catalog).
- Excessive tardiness (6) may be considered as an absence.
- It is the responsibility of the student to inform the instructor of an excused absence. An absence may be excused by the Dean for participation in an authorized college activity or for a valid medical reason.
- Any student who is disruptive to the class will be dismissed from the class and may be dropped from the course. Any student misconduct will be reported to the Dean of Student Services (See Student Handbook.)
- Any student found with unauthorized material(s) such as cheat sheets, electronic devices, etc. during a quiz/exam or copying from another student's work will be subject to disciplinary action.
- Please do not bring cell phones, ipods, or other electronic devices to class or be sure they are turned off. Computers (lap tops) may be used with special permission and only for math class material.
- No use of tobacco products is permitted anywhere on campus.

11. Course Outline/Schedule

Weeks 1 – 4 Textbook Chapters P ,1 ,2 and 5

Weeks 5 – 8 Textbook Chapters 2, 3, 4

Weeks 9 – 11 Textbook Chapters 6

Weeks 12 – 14 Textbook Chapter 7

Week 15 Final Exam

12. Non-Discrimination Statement

Admission, employment, and program policies of Ranger College are non-discriminatory with regard to race, creed, color, sex, age, disability, and national origin.

13. 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.