



RANGER COLLEGE

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COURSE SYLLABUS

**Precalculus**

**MATH 2312**

**3 credit hours**

**INSTRUCTOR:**

**Emily Constancio**

**INSTRUCTOR:** Emily Constancio  
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**OFFICE:** Science Rm #3  
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### 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

Applications of algebra and trigonometry to the study of elementary functions and their graphs including polynomial, rational, exponential, logarithmic, and trigonometric functions. May include topics from analytic geometry.

### 3) Required Background or Prerequisites

Two years of high school algebra one year of high school geometry

### 4) Required Textbook and Course Materials

- Sullivan, Precalculus, 10<sup>th</sup> Edition, ISBN: 9780321979070
- MyMathLab Access Code, graphic calculator (TI – 83 or – 84 highly recommended)

### 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:

- ❖ Demonstrate and apply knowledge of properties of functions, including domain and range, operations, compositions, and inverses.
- ❖ Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.
- ❖ Apply graphing techniques.
- ❖ Evaluate all roots of higher degree polynomial and rational functions.
- ❖ 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/methods include informal lectures, discussion, PowerPoints, computer managed homework, computer delivered tutorials, limited self-pacing, instructional television, and distance delivery via Blackboard. At least one assignment will be conducted in which students will work in three or four member teams to accomplish specific objectives. An example could be to gather data to formulate a system of linear equations in three variables and apply a matrix technique to solve the system.

## 9) Methods of Assessment

- ❖ **MyMathLab (20%) (CT, COM, EQS, PR):** This grade component will be determined by combining the percent completion of all assignments with the composite average of the assignments completed.
- ❖ **Quizzes (15%) (CT, COM, EQS, PR):** This will be short papers to determine comprehension; the grade will be found by averaging all papers together.
- ❖ **Major Exams (40%) (CT, COM, EQS, PR):** There will be 4 exams, each covering multiple chapters from the textbook.
- ❖ **Final Exam (25%) (CT, COM, EQS, PR):** This is a departmental exam and may be used for data collection purposes as well as determining the course grade.

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.
- Use the restroom, eat breakfast, talk to your mom before class starts, please do not leave once we begin
- I will be late, it's inevitable, but DO NOT LEAVE. If I am absent, you will get an email prior to class starting.
- 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.)
- Anything you turn into me will be completed in pencil. I will not grade your work in pen.
- I will provide notes for you to fill in, however there will be times you will need paper, please bring your own.
- No use of tobacco products is permitted in any campus buildings.
- You are expected to log into MyMathLab (MML) at least twice a week (minimum). This will help you stay on top of homework.

- **If a student has 6 absences .....the student WILL be dropped from the class with a grade of F (Ranger College General Catalog).**
- 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 get a zero. This applies to your Final, there will be a formula sheet you can use, but I will provide it.
- You will be allowed to work together on your in class quizzes and you will be tempted to work together on your homework, if so great, but you will work alone and without any notes when taking a test. You will not have very many learning aids for the final so be prepared.

**11) Course Outline/Schedule**

Weeks 1 – 3	Chapters 2 – 3
Weeks 4 – 7	Chapters 4, 5 & 11
Weeks 8 – 10	Chapters 6
Weeks 11 – 12	Chapter 7
Weeks 13 – 14	Chapter 8
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.

**14) Revision of Syllabus**

The content in this syllabus is subject to change based upon the needs of a particular class. Any revisions will be distributed in writing.