

MATH 1316



RANGER COLLEGE

COURSE SYLLABUS

Trigonometry

MATH 1316
3 credit hours

INSTRUCTOR: James Wood

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MAIN OFFICE PHONE: 254-918-7232

OFFICE HOURS: By email or zoom, if needed.

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.

Course Description:

In-depth study and applications of trigonometry including definitions, identities, inverse functions, solution of equations, graphing, and solving triangles. Additional topics such as vectors, polar coordinates, and para- metric equations may be included.

Required Background and Prerequisites: MATH 1314 or concurrent enrollment.

Required Textbook and Course Material: Lumen; Graphing calculator (TI – 84+) strongly recommended

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.

Learning Outcomes Upon successful completion of this course the student will:

1. Compute the values of the trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.
2. Graph trigonometric functions and their transformations.
3. Prove trigonometric identities.
4. Solve trigonometric equations.
5. Solve right and oblique triangles.
6. Use the concepts of trigonometry to solve applications.

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, inter- pretation, 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.

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- 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 – 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.

Methods of Instruction: This is an online class. Videos, student resources, homework, and tests will be posted in Blackboard.

Methods of Assessment

- Homework (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.
- Major Exams (55%) (CT, COM, EQS, PR)-There will be 2 – 5 class period length exams, each covering single or 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=Below 60

Classroom Policies/procedures:

- With this course being online, completing homework, exams, and viewing videos, will be considered your attendance for the course.
- It will be your responsibility to complete the homework and exams by the due dates.
- It will be your responsibility to request assistance during the course when needed.
- I will drop your 3 lowest homework grades at the end of the semester.
- If your final exam is higher than your lowest regular exam, I will replace your lowest regular exam grade with your final exam grade. **I do not give make up exams.**

Course Outline/Schedule:

- Weeks 1 – 4 Chapter 1
- Weeks 5 – 7 Chapters 2
- Weeks 8 – 10 Chapter 3
- Weeks 11 – 12 Chapter 4
- Weeks 13 – 14 Chapter 5
- Week 15 – Final Exam

Test Material

Test 1: Chapters 1

Test 2: Chapters 2

Test 3: Chapter 3

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Test 4: Chapter 4

Test 5: Chapter 5

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

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.

Revision of Syllabus: The contents of this syllabus may be revised to better meet the needs of a particular class. Any revisions will be presented to class members in writing.

If you only do what you can do, then you will never be more than you are now!

A goal without a plan is only a wish!

If you always do what you've always done, you'll always get what you've always gotten!

When the time has come to perform, the time to prepare has passed!