

**Math 2412.364 Syllabus
Dual Credit Pre-Calculus
Lubbock-Cooper High School
2017-2018**

Instructor: Mrs. Morgan Groves
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Textbook: *Precalculus* by Neal, Gustafson, & Hughes, Cengage Learning, 2013

Course Description: This course covers the study of algebraic, polynomial, rational, exponential, logarithmic, and trigonometric functions. Topics in analytic geometry are covered.

Course Requirements: To maximize the potential to complete this course, a student should attend all class meetings, take notes and participate in class, and complete all homework assignments and examinations including the final exam in the allotted time.

Student Learning Outcomes/Competencies:

Upon successful completion of this course students will:

- Demonstrate and apply knowledge of properties of functions. (1.2, 1.6, 1.7)
- Recognize and apply algebraic and transcendental functions and solve related equations. (2.1–2.5, 3.6, 4.2, 4.3)
- Apply graphing techniques to algebraic and transcendental functions. (2.1–2.5, 4.4, 4.5, 7.2)
- Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians. (4.1, 4.2)
- Prove trigonometric identities. (4.3, 5.3)
- Solve right and oblique triangles. (6.1–6.4)

Grading:	Tests (7 total)	50%	<u>Grading Scale:</u>	A 90-100
	Homework/Quizzes	25%		B 80-89
	Final Exam	25%		C 70-79
				D 60-69
				F 59 or below

****Note: Students must justify answers or show work on all problems to receive full credit.*

Homework: Homework will be assigned through the online system WebAssign and you are expected to complete all problems in a notebook. This is for your learning purposes and will not be checked or graded directly. Your homework grades will be strictly the grades received on each assignment on WebAssign. Homework is usually posted no less than 48 hours before the due date. There are **no excuses** for late assignments (internet outages, school activities, work, etc.). **No homework extensions will be granted.** The best way to succeed with online homework is to print off or copy down the problems prior to starting the assignment. Once you have done the problems, then go back to the online system and input your answers. Keep your homework notebook organized and neat in case you need to redo a problem or ask questions about a problem. Your course key is **southplainscollege 8984 9501**.

Quizzes: The instructor reserves the right to quiz whenever she feels it is necessary. There will not be a regular quizzing schedule. However, quizzes may be announced or pop.

Tests: There will be a total of 7 exams in this course. No notes/homework/textbooks will be allowed on ANY exam. All exams are expected to be completed in the allotted class time, no exceptions. No exam grades will be dropped. However, ***if your final exam grade is higher than your lowest test grade, then it will replace your lowest test grade at the end of the course.*** Exam corrections are for your own learning well-being and will not be graded but are expected to be completed after each exam is returned.

Assignments Missed Because of an Absence: If you have an unplanned absence (emergency, sickness etc), it is your responsibility to contact the instructor **via email** as soon as possible and to **complete** your make-up work **by the next class period**. If you have a planned absence (doctor's appointment, school extracurricular activity, etc.), it is your responsibility to get your make-up work **before** you leave. If you fail to do the above, you will receive a zero for the assignment. If you know you will miss an exam, you must contact the instructor via e-mail **BEFORE** the exam to make arrangements to take the exam at a different time. If you miss an exam unexpectedly, you must e-mail the instructor as soon as possible to inform her of the situation and to provide documentation that justifies your absence (doctor's note, police report, etc.). Only then will the possibility for a make-up exam be discussed.

Late work: Late work is not accepted. If you do not turn in an assignment on time, you will receive a zero.

Class Notes: The outline to the class notes was printed for each student by the LCP print shop. Every student is responsible for bring these notes with you to class every day. We will work through the notes together in class, but the bulk of the definitions and formulas will be provided in the printed notes.

Calculators: There will be times throughout the year when students will need a graphing calculator to complete an assignment. Students may use a TI-84 series graphing calculator or below. No TI-89, TI-92, or TI-nspires will be allowed in this course. If you want to rent out a calculator for the semester, you must turn in a calculator agreement form no later than the end of the first week of classes.

Materials: Students are expected to bring the following to class each day:

- Textbook
- Notebook
- Pencil and eraser
- Calculator (approved)
- Straight-edge notebook paper

Tardiness: A student is tardy if he/she is not in the classroom with all required materials when the tardy bell rings.

Academic Integrity: Academic dishonesty will not be tolerated. You are expected to uphold the ideas of academic honesty. All work that is graded must be your own. This policy applies to all work attempted in this course. If this policy is violated the student will receive an F for the assignment and will be dropped with an F. For more details on what is considered cheating, see the South Plains College catalog.

Class Rules:

- Be courteous and respectful at all times.
- Be on time and ready to learn.
- Keep your hands and feet to yourself.
- Use only pencil for all assignments.
- Wait to be dismissed before leaving class. The bell does not dismiss you!!
- No food or drinks in class other than bottled water.
- Students are not permitted to use electronic devices, other than a calculator, in class. **Put the cell phones away!!**
- Adhere to the requirements of the Student Code of Conduct.

Core Objectives:

Communication Skills: effective development, interpretation, and expression of ideas through written, oral, and visual communication.

Critical Thinking: creative thinking, innovation, inquiry, analysis, evaluation, and synthesis of information.

- Generate and communicate ideas by combining, changing, and reapplying existing information
- Gather and assess information relevant to a question
- Analyze, evaluate, and synthesize information Empirical and Quantitative

Empirical and Quantitative Competency Skills: the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

Disclaimer

The instructor reserves the right to alter any class policies as deemed necessary by the instructor or South Plains College, and will announce any changes in class. If a student has any questions about a change in policy ask the instructor for clarification.

To successfully complete the course objectives, the students must already be prepared to factor algebraic expressions, reduce, add, subtract, multiply, divide, and simplify rational expressions, and simplify, add, subtract, multiply and divide exponential and radical expressions.

Equal Opportunity: South Plains College strives to accommodate the individual needs of all students in order to enhance their opportunities for success in the context of a comprehensive community college setting. It is the policy of South Plains College to offer all educational and employment opportunities without regard to race, color, national origin, religion, gender, disability, or age.

Disability 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 Special Services Office at South Plains College 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 Special Services Coordinator. You must also talk directly to your instructor to inform her of your requests. This conversation must happen within the first two weeks of classes.

Date	Topic
Aug 28 Monday	Introduction/§R.2 Complex Numbers
Aug 30 Wednesday	§R.4 Other Types of Equations
Sept 1 Friday	Homework Day
Sept 4 Monday	Labor Day Holiday
Sept 6 Wednesday	§R.5 Inequalities/§R.7 Equations of Lines
Sept 8 Friday	Homework Day
Sept 11 Monday	§1.1 Graphs of Equations
Sept 13 Wednesday	§1.2 Functions and Function Notation
Sept 15 Friday	Homework Day
Sept 18 Monday	§1.6 Operations on Functions
Sept 20 Wednesday	§1.7 Inverse Functions
Sept 22 Friday	Review Day
Sept 25 Monday	Exam 1 – Chapter 1
Sept 27 Wednesday	§2.1 Quadratic Functions
Sept 29 Friday	Homework Day
Oct 2 Monday	§2.2 Polynomial Functions
Oct 4 Wednesday	§2.3 Rational Zeros of Polynomial Functions
Oct 6 Friday	Homework Day
Oct 9 Monday	Columbus Day (Student Holiday)
Oct 11 Wednesday	§2.3 Rational Zeros of Polynomial Functions Homework Day
Oct 13 Friday (SPC Fall Break)	Homework Day
Oct 16 Monday	§2.4 Roots of Polynomial Equations
Oct 18 Wednesday	§2.5 Rational Functions
Oct 20 Friday	Homework Day

Date	Topic
Oct 23 Monday	§2.6 Polynomial and Rational Inequalities
Oct 25 Wednesday	§8.1 Systems of Linear Equations
Oct 27 Friday	Review
Oct 30 Monday	Exam 2 – Chapter 2
Nov 1 Wednesday	§8.2 Gaussian Elimination and Matrix Methods
Nov 3 Friday	Homework Day
Nov 6 Monday	§8.5 Determinants
Nov 8 Wednesday	§8.6 Partial Fractions
Nov 10 Friday	Homework Day
Nov 13 Monday	§3.5 Properties of Logarithms
Nov 15 Wednesday	§3.6 Exponential and Logarithmic Equations
Nov 17 Friday	Homework Day
Nov 20 - 24	Thanksgiving
Nov 27 Monday	§10.2 Sequences, Series, and Summation Notation §10.3 Arithmetic Sequences and Series
Nov 29 Wednesday	§10.4 Geometric Sequences and Series
Dec 1 Friday	Review Day
Dec 4 Monday	Exam 3 – Chapters 8, 3, & 10
Dec 6 Wednesday	§4.1 Angles and Their Measurements
Dec 8 Friday	Homework Day
Dec 11-14 Finals Week	§4.2 The Unit Circle and Trigonometric Functions
Jan 8 Monday	Review Day
Jan 10 Wednesday	Review Day
Jan 12 Friday	Review Day
Jan 15 Monday	MLK Day Holiday

Date	Topic
Jan 17 Wednesday	§4.3 Trigonometric Functions of Any Angle; Fundamental Identities
Jan 19 Friday	Homework Day
Jan 22 Monday	§4.4 Graphs of the Sine and Cosine Functions
Jan 24 Wednesday	§4.5 Graphs
Jan 26 Friday	Review Day
Jan 29 Monday	Exam 4 – Chapter 4
Jan 31 Wednesday	§5.1 Inverse Trigonometric Functions
Feb 2 Friday	Homework Day
Feb 5 Monday	§5.3 Verifying Trigonometric Identities
Feb 7 Wednesday	§5.4 Sum and Difference Formulas
Feb 9 Friday	Homework Day
Feb 12 Monday	§5.5 Double-Angle, Power-Reduction, and Half-Angle Formulas §5.6 Product-to-Sum and Sum-to-Product Formulas
Feb 14 Wednesday	§5.7 Trigonometric Equations I §5.8 Trigonometric Equations II
Feb 16 Friday	Review Day
Feb 19 Monday	Presidents' Day – Student Holiday
Feb 21 Wednesday	Exam 5 – Chapter 5
Feb 23 Friday	§6.1 Right Triangles
Feb 26 Monday	§6.2 More Right-Triangle Applications
Feb 28 Wednesday	§6.3 Law of Sines
Mar 2 Friday	§6.4 Law of Cosines
Mar 5 Monday	Review
Mar 7 Wednesday	Exam 6 – Chapter 6
Mar 9 Friday	
Mar 12 - 16	SPRING BREAK!!!

Date	Topic
Mar 19 Monday	§7.1 Polar Coordinates
Mar 21 Wednesday	§7.2 Polar Equations and Graphs
Mar 23 Friday	Homework Day
Mar 26 Monday	§7.4 Vectors
Mar 28 Wednesday	§7.5 Dot Product
Mar 30 Friday	Weather Day
Apr 2 Monday (SPC Easter Break)	Homework/Review
Apr 4 Wednesday	§9.1 The Circle and the Parabola
Apr 6 Friday	Homework Day
Apr 9 Monday	§9.2 The Ellipse
Apr 11 Wednesday (STAAR)	
Apr 13 Friday	Homework Day
Apr 16 Monday	§9.3 The Hyperbola
Apr 18 Wednesday	§9.4 Nonlinear Systems of Equations
Apr 20 Friday	Review Day
Apr 23 Monday	Exam 7 – Chapters 7 & 9
Apr 25 Wednesday	Review for Final Exam
Apr 27 Friday	Review for Final Exam
Apr 30 Monday	Review for Final Exam
May 2 Wednesday	Review for Final Exam
May 4 Friday	Review for Final Exam
May 7 Monday Finals Week	Final Exam – Comprehensive (Date is subject to change)