Math 2412.365 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%	Grading Scale:	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 class key is **southplainscollege 7922 8369**.

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 announces 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 informer 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-*n*spires 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 29 Tuesday	Introduction/§R.2 Complex Numbers
Aug 31 Thursday	§R.4 Other Types of Equations
Sept 1 Friday	Homework Day
Sept 5 Tuesday	§R.5 Inequalities/§R.7 Equations of Lines
Sept 7 Thursday	§1.1 Graphs of Equations
Sept 8 Friday	Homework Day
Sept 12 Tuesday	§1.2 Functions and Function Notation
Sept 14 Thursday	§1.6 Operations on Functions
Sept 15 Friday	Homework Day
Sept 19 Tuesday	§1.7 Inverse Functions
Sept 21 Thursday	§2.1 Quadratic Functions
Sept 22 Friday	Review Day
Sept 26 Tuesday	**Exam 1 – Chapter 1**
Sept 28 Thursday	§2.2 Polynomial Functions
Sept 29 Friday	Homework Day
Oct 3 Tuesday	§2.3 Rational Zeros of Polynomial Functions
Oct 5 Thursday	§2.3 Rational Zeros of Polynomial Functions
Oct 6 Friday	Homework Day
Oct 10 Tuesday	§2.4 Roots of Polynomial Equations
Oct 12 Thursday	§2.5 Rational Functions
Oct 13 Friday (SPC Fall Break)	Homework Day
Oct 17 Tuesday	§2.6 Polynomial and Rational Inequalities
Oct 19 Thursday	§8.1 Systems of Linear Equations
Oct 20 Friday	Review Day

Date	Topic
Oct 24 **Tuesday**	**Exam 2 – Chapter 2**
Oct 26 **Thursday**	§8.2 Gaussian Elimination and Matrix Methods
Oct 27 **Friday**	Homework Day
Oct 31 **Tuesday**	§8.5 Determinants
Nov 2 **Thursday**	§8.6 Partial Fractions
Nov 3 **Friday**	Homework Day
Nov 7 **Tuesday**	§3.5 Properties of Logarithms
Nov 9 **Thursday**	§3.6 Exponential and Logarithmic Equations
Nov 10 **Friday**	Homework Day
Nov 14 **Tuesday**	§10.2 Sequences, Series, and Summation Notation
Nov 16 **Thursday**	§10.3 Arithmetic Sequences and Series
Nov 17 **Friday**	Homework Day
Nov 20 - 24	**Thanksgiving**
Nov 28 **Tuesday**	§10.4 Geometric Sequences and Series
Nov 30 **Thursday**	Review Day
Dec 1 **Friday**	Homework Day/Review Day
Dec 5 **Tuesday**	**Exam 3 – Chapters 8, 3, & 10**
Dec 7 **Thursday**	§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 9 **Tuesday**	Review Day
Jan 11 **Thursday**	Review Day
Jan 12 **Friday**	Review Day
Jan 16 **Tuesday**	§4.3 Trigonometric Functions of Any Angle; Fundamental Identities

Date	Topic
Jan 18 **Thursday**	§4.4 Graphs of the Sine and Cosine Functions
Jan 19 **Friday**	Homework Day
Jan 23 **Tuesday**	§4.5 Graphs
Jan 25 **Thursday**	Review Day
Jan 26 **Friday**	Homework Day
Jan 30 **Tuesday**	**Exam 4 – Chapter 4**
Feb 1 **Thursday**	§5.1 Inverse Trigonometric Functions
Feb 2 **Friday**	Homework Day
Feb 6 **Tuesday**	§5.3 Verifying Trigonometric Identities
Feb 8 **Thursday**	§5.4 Sum and Difference Formulas
Feb 9 **Friday**	Homework Day
Feb 13 **Tuesday**	§5.5 Double-Angle, Power-Reduction, and Half-Angle Formulas §5.6 Product-to-Sum and Sum-to-Product Formulas
Feb 15 **Thursday**	§5.7 Trigonometric Equations I §5.8 Trigonometric Equations II
Feb 16 **Friday**	Review Day
Feb 20 **Tuesday**	**Exam 5 – Chapter 5**
Feb 22 **Thursday**	§6.1 Right Triangles
Feb 23 **Friday**	Homework Day
Feb 27 **Tuesday**	§6.2 More Right-Triangle Applications
Mar 1 **Thursday**	§6.3 Law of Sines
Mar 2 **Friday**	§6.4 Law of Cosines
Mar 6 **Tuesday**	Review
Mar 8 **Thursday**	**Exam 6 – Chapter 6**
Mar 9 **Friday**	
Mar 12 - 16	**SPRING BREAK!!!**

Date	Topic
Mar 20 **Tuesday**	§7.1 Polar Coordinates
Mar 22 **Thursday**	§7.2 Polar Equations and Graphs
Mar 23 **Friday**	Homework Day
Mar 27 **Tuesday**	§7.4 Vectors
Mar 29 **Thursday**	§7.5 Dot Product
Mar 30 **Friday**	**Weather Day**
Apr 3 **Tuesday**	Homework/Review
Apr 5 **Thursday**	§9.1 The Circle and the Parabola
Apr 6 **Friday**	Homework Day
Apr 10 **Tuesday** **(STAAR)**	
Apr 12 **Thursday**	§9.2 The Ellipse
Apr 13 **Friday**	Homework Day
Apr 17 **Tuesday**	§9.3 The Hyperbola
Apr 19 **Thursday**	§9.4 Nonlinear Systems of Equations
Apr 20 **Friday**	Review Day
Apr 24 **Tuesday**	**Exam 7 – Chapters 7 & 9**
Apr 26 **Thursday**	Review for Final Exam
Apr 27 **Friday**	Review for Final Exam
May 1 **Tuesday**	Review for Final Exam
May 3 **Thursday**	Review for Final Exam
May 4 **Friday**	Review for Final Exam
May 7 **Monday** **Finals Week**	**Final Exam – Comprehensive** **(Date is subject to change)**