

South Plains College
Common Course Syllabus: MATH 2412
December 2019

Department: Mathematics, Engineering, and Computer Science

Discipline: Mathematics

Course Number: MATH 2412

Course Title: Pre-Calculus

Available Formats: conventional

Campuses: Levelland and Dual Credit

Course Description: In-depth combined study of algebra, trigonometry, and other topics for calculus readiness.

Prerequisite: Minimum score of 350 on the TSIA, TSI-exempt status, or a successful completion with a grade of 'C' or better in MATH 1314.

Credit: 4 **Lecture:** 3 **Lab:** 2

Textbook: *Pre-Calculus*, Abramson, OpenStax

Supplies: Please see the instructor's course information sheet for specific supplies.

This course partially satisfies a Core Curriculum Requirement: Mathematics Foundational Component Area (020)

Core Curriculum Objectives addressed:

- **Communications skills**—to include effective written, oral and visual communication
- **Critical thinking skills**—to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Empirical and quantitative competency skills**—to manipulate and analyze numerical data or observable facts resulting in informed conclusions

Student Learning Outcomes: Upon completion of this course and receiving a passing grade, the student will be able to:

1. Demonstrate and apply knowledge of properties of functions.
2. Recognize and apply algebraic and transcendental functions and solve related equations.
3. Apply graphing techniques to algebraic and transcendental functions.
4. Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.
5. Prove trigonometric identities.
6. Solve right and oblique triangles.

Student Learning Outcomes Assessment: A pre- and post-test questions will be used to determine the extent of improvement that the students have gained during the semester

Course Evaluation: There will be departmental final exam questions given by all instructors.

Attendance Policy: Attendance and effort are the most important activities for success in this course. Records of your attendance are maintained throughout the semester. Five (5) absences, **for any reason**, are

allotted to the student for the semester. Tardies count as one-half (1/2) of an absence. Tardies will be applied for consistently being late to class, as deemed by the instructor and leaving class early. If this number is exceeded, the instructor has the right to drop you with a grade of F or an X, depending on their discretion.

Plagiarism violations include, but are not limited to, the following:

1. Turning in a paper that has been purchased, borrowed, or downloaded from another student, an online term paper site, or a mail order term paper mill;
2. Cutting and pasting together information from books, articles, other papers, or online sites without providing proper documentation;
3. Using direct quotations (three or more words) from a source without showing them to be direct quotations and citing them; or
4. Missing in-text citations.

Cheating violations include, but are not limited to, the following:

1. Obtaining an examination by stealing or collusion;
2. Discovering the content of an examination before it is given;
3. Using an unauthorized source of information (notes, textbook, text messaging, internet, apps) during an examination, quiz, or homework assignment;
4. Entering an office or building to obtain an unfair advantage;
5. Taking an examination for another;
6. Altering grade records;
7. Copying another's work during an examination or on a homework assignment;
8. Rewriting another student's work in Peer Editing so that the writing is no longer the original student's;
9. Taking pictures of a test, test answers, or someone else's paper.

Student Code of Conduct Policy: Any successful learning experience requires mutual respect on the part of the student and the instructor. Neither instructor nor student should be subject to others' behavior that is rude, disruptive, intimidating, aggressive, or demeaning. Student conduct that disrupts the learning process or is deemed disrespectful or threatening shall not be tolerated and may lead to disciplinary action and/or removal from class.

Diversity Statement: In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

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 Disability Services Office 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 Disability Services Office. For more information, call or visit the Disability Services Office at Levelland (Student Health & Wellness Office) 806-716-2577, Reese Center (Building 8) 806-716-4675, or Plainview Center (Main Office) 806-716-4302 or 806-296-9611.

Nondiscrimination Policy: South Plains College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Vice President for Student Affairs, South Plains College, 1401 College Avenue, Box 5, Levelland, TX 79336. Phone number 806-716-2360.

Title IX Pregnancy Accommodations Statement: If you are pregnant, or have given birth within six months, Under Title IX you have a right to reasonable accommodations to help continue your education. To [activate](#) accommodations you must submit a Title IX pregnancy accommodations request, along with specific medical documentation, to the Director of Health and Wellness. Once approved, notification will be sent to the student and instructors. It is the student's responsibility to work with the instructor to arrange

accommodations. Contact the Director of Health and Wellness at 806-716-2362 or [email cgilster@southplainscollege.edu](mailto:cgilster@southplainscollege.edu) for assistance.

Campus Concealed Carry: Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in South Plains College buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and South Plains College policy, license holders may not carry a concealed handgun in restricted locations. For a list of locations and Frequently Asked Questions, please refer to the Campus Carry page at: <http://www.southplainscollege.edu/campuscarry.php> Pursuant to PC 46.035, the open carrying of handguns is prohibited on all South Plains College campuses. Report violations to the College Police Department at 806-716-2396 or 9-1-1.

SPC Bookstore Price Match Guarantee Policy: If you find a lower price on a textbook, the South Plains College bookstore will match that price. The difference will be given to the student on a bookstore gift certificate! The gift certificate can be spent on anything in the store.

If students have already purchased textbooks and then find a better price later, the South Plains College bookstore will price match through the first week of the semester. The student must have a copy of the receipt and the book has to be in stock at the competition at the time of the price match.

The South Plains College bookstore will happily price match BN.com & books on Amazon noted as *ships from and sold by Amazon.com*. Online marketplaces such as *Other Sellers* on Amazon, Amazon's Warehouse Deals, *fulfilled by Amazon*, BN.com Marketplace, and peer-to-peer pricing are not eligible. They will price match the exact textbook, in the same edition and format, including all accompanying materials, like workbooks and CDs.

A textbook is only eligible for price match if it is in stock on a competitor's website at time of the price match request. Additional membership discounts and offers cannot be applied to the student's refund.

Price matching is only available on in-store purchases. Digital books, access codes sold via publisher sites, rentals and special orders are not eligible. Only one price match per title per customer is allowed.

Note: The instructor reserves the right to modify the course syllabus and policies, as well as notify students of any changes, at any point during the semester.



Mathematics 2412 – Pre-Calculus
Section 002: Monday/Wednesday 2:30 PM – 4:35 PM
Room: Agriculture Building, Room 103, Levelland Campus

Instructor Information

Contact Information **Instructor:** Evan Vargas

Phone: (806) 716-4673

Email: evargas@southplainscollege.edu

Office Hours Agriculture Building, AG107, Levelland Campus

Monday/Wednesday: 10:40 AM – 10:55 AM @ TA209, Levelland
 12:55 PM – 2:25 PM @ AG107, Levelland

Tuesday/Thursday: 10:40 AM – 10:55 AM @ TA209, Levelland
 2:15 PM – 2:30 PM @ Building 2, 226, Reese

Friday: 8:30 AM – 12:00 PM @ AG107, Levelland

Course Information

Textbook *Precalculus by Openstax* - <https://openstax.org/details/books/prec calculus>

Knewton Link <https://knerd.me/hqrzdy>

Materials Pencils, paper, and calculator

Grading Policy

Grading Scale:	90-100	A	Weights:	Homework	10%
	80-89	B		Quiz	10%
	70-79	C		Exams (4)	15% each
	60-69	D		Final Exam	20%
	0-59	F		Total	100%

Online Homework

Homework is assigned online through Knewton. The homework enables students to receive feedback right away as they work through each assignment. Physical homework is not required to turn in. Each set of online homework assignments will be due the day of the corresponding Exam.

In-class Quizzes

Quizzes will be given periodically and will cover material presented by the instructor. Quizzes may be handouts or computer based. No make-up quizzes will be allowed for any reason.

In-class Examinations

Exams will cover material from Homework, Quizzes, and Lectures as indicated by the course itinerary. Examinations will be a combination of open answer, fill in the box, and/or multiple choice. Students need only bring pencils, lead, and erasers. No other material will be required unless stated in class.

Cell phones, smart watches, tablets, computers, etc. **are not allowed** and students will be asked to remove their device(s) or leave the class. Students seen with and using unapproved devices will receive an automatic 0 for the exam and be dropped from the course at the instructor's discretion.

Final Examination

A **comprehensive** final exam will be given at the end of the semester. Failure to attempt the final exam will result in a failing grade for the course. The final exam will be given on **Monday May 4th, 2020 from 1:00 PM – 3:00 PM** Conflicting test schedules must be worked out with instructors.

Returning Grades

The instructor will attempt to return any graded assignment by the next class meeting or as soon as possible. Any discrepancies with a particular grade must be contested to the instructor within **two weeks**. If the student does not contest their grade they will forfeit the right for amendments.

Classroom Policies**Class Cancellation Policy**

In the event of class being canceled by the school/instructor, the student will be responsible for the lecture material missed. The class will continue on the following class day. All information will be available to the student on Blackboard and/or sent via email.

South Plains College Email Policy

The instructor will only acknowledge, respond, and send emails to your assigned South Plains College email. This ensures the intended recipient receives all correspondence from the instructor. It is the students' responsibility to have their email set up and ready to use by the end of the first week of class.

Withdrawal Policy

To withdraw from this class, the student will need to go to the Admissions and Records office either on the Levelland campus or the Reese Center campus, and fill out a drop notification form. If the student does not initiate the drop on their behalf the instructor will do instead.

Student Conduct Policy

Students must present themselves in a respectable behavior while attending South Plains College and while in the classroom. Any form of misconduct by the student will first be given a verbal warning, second by one-to-one communication, and finally through academic discipline as deemed necessary by the instructor, chair, or dean.

Course Itinerary.

Week 1	Jan. 13	Review of solving equations and the Cartesian Coordinate System Solving Linear and Absolute Value Equations with Inequalities
	<i>Jan. 15</i>	Graphing Linear and Absolute Value Functions
Week 2	Jan. 20	Holiday – No Class
	Jan. 22	System of Equations in 2 and 3 Variables; Complex Numbers
Week 3	<i>Jan. 27</i>	Complex Numbers; Solving Quadratic Equations
	Jan. 29	Graphing Quadratic Functions and Solving Radical Equations
Week 4	Feb. 3	Examination 1
	Feb. 5	Factoring and Solving Polynomial Equations with Long/Synthetic Division
Week 5	Feb. 10	Graphing Polynomial Functions; Solving Rational Equations
	<i>Feb. 12</i>	Graphing Rational Functions; Function Transformations
Week 6	Feb. 17	Solving and Graphing Exponentials; Logarithm Properties
	<i>Feb. 19</i>	Solving and Graphing Logarithms; Exp and Log Applications
Week 7	Feb. 24	Function Algebra and Piecewise Functions
	Feb. 26	Examination 2
Week 8	Mar. 2	Angles and Right Triangle Trigonometry; Unit Circle with Sine and Cosine
	Mar. 4	Tangent, Cosecant, Secant, and Cotangent; Graphing Sine Functions
Week 9	<i>Mar. 9</i>	Graphing Cosine, Tangent, Cotangent, Secant and Cosecant Functions
	Mar. 11	Graphing Inverse Sine, Cosine, and Tangent Functions; Using and Verifying Identities
Week 10	<i>Mar. 23</i>	Fundamental Identities; Sum and Difference Formulas
	Mar. 25	Double Angle and Half Angle Identities; Sum-to-Product and Product-to-Sum
Week 11	Mar. 30	Examination 3
	Apr. 1	Solving Trig Equations 1 and 2
Week 12	Apr. 6	Solving Inverse Trig Equations
	<i>Apr. 8</i>	Law of Sines and Cosines
Week 13	Apr. 13	Vectors: Algebra, Dot Product, Magnitude and Direction
	<i>Apr. 15</i>	Matrices: Algebra, Inverse, and Determinants
Week 14	Apr. 20	Solving Matrix Equations – Gauss, Gauss-Jordan, and Cramer’s Rule
	Apr. 22	Examination 4
Week 15	Apr. 27	Partial Fraction Decomposition
	Apr. 29	Final Examination Review
Week 16	May 4	Final Exam 1:00 PM – 3:00 PM