South Plains College
Mathematics Department
Precalculus – MATH 2412.003 T/Th 2:30-4:35
Course Syllabus – Fall 2016

Instructor: Karol Albus
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Email: kalbus@southplainscollege.edu (preferred method of contact)
Office hours: Monday: 3:00-4:30, Tuesday: 10:00-11:00, Wednesday: 9:30-10:00, Thursday: 10:00-11:00, Friday: 8:00-12:00 Other times by appointment.

Disclaimer: The instructor reserves the right to alter any class policies/dates as deemed necessary by the instructor, and will announce any changes in class.

Please check your email regularly as it is they only way I have to contact you outside of class.

Course Description: MATH 2412 - Precalculus (4:3:2) This course covers the study of algebraic, polynomial, rational, exponential, logarithmic and trigonometric functions. Topics in analytic geometry are covered. Semester Hours: 4 Lecture Hours: 3 Lab Hours: 2 Pre-requisite: Two units of high school algebra or MATH 1314.

Learning Outcomes
Upon successful completion of this course, students will:
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.

Textbook: Precalculus by Neal, Gustafson, and Hughes, 2013, ISBN: 0-495-82662-6.

Supplies: You will need a 3 ring binder (1.5 inch), dividers, paper, graph paper, hole punch, textbook, pencils, and erasers. **You will be allowed the use of a scientific calculator most of the time. However, it will be restricted on some days. You may NOT use your cell phone/iPad as your calculator, TI-89, TI-92 or TI-Nspire.** These are pretty basic supplies, but you will need to bring them to each class. I require pencil on all graded work. You will have one warning, and after that, you will earn a zero on that work because you failed to follow my instruction.

Attendance: Attendance and effort are the most important activities for success in this course. Class attendance may be taken at any time during the class period, so please do not be late or leave early. Leaving early and being tardy will be considered ½ absence. **You may be dropped from this course with a grade of X or F if you are absent four consecutive classes or if you exceed five absences (for any reason) throughout the semester.** If you should incur an absence, please refer to your syllabus, contact the instructor, or contact another student to get the assignment completed BEFORE the next class. **Late homework and makeup quizzes are not an option.** I will drop 4 daily grades which may include zeros from absences. Make ups for **Exams** will only be provided under extreme, documented circumstances. If at all possible, the instructor should be notified prior to the exam day.

Assignment Policy: Homework assignments will be made at each class meeting. The homework is not a tool by which I torture you, but rather an opportunity for you to practice the skills presented in class. Frequently, the homework will be collected or quizzes will be administered. Keep all class materials (notes, handouts, homework, quizzes, and exams) organized in a notebook (3-ring binder). These materials are subject to be turned in for grading at any time. Please make certain all materials accompany you to each class meeting. **No late**

assignments will be accepted. You should show all work when doing homework. Simply writing the problem and the answer is not "doing homework." Using a solutions manual or an app that shows you the steps, and copying them down is NOT "doing homework." **Remember your effort is key to your success. You have to focus your effort on being able to complete the problems on a quiz/exam without any outside resources.**

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Grading: Daily work (homework, quizzes, notebook) will count for 16% of the final grade, while all exams count for 80% of the final grade. Expect four major exams (16% each) throughout the course and a cumulative final exam (20%) at the end of the course. **Remember that no late or makeup work will be accepted. If you are not in class you will earn a grade of 0 for homework/quiz on that day.** Your final average in the course will determine the letter grade posted on your transcript. This grade is determined by the following scale: A (90-100%), B (80-89%), C (70-79%), D (60-69%), F (0-59%).

Grade Reporting: Grades will be posted on blackboard. If you think I have recorded a grade incorrectly, please notify me immediately. I keep a hard copy of my grades and will be glad to check it.

Email Policy: All students at South Plains College are assigned a standardized SPC e-mail account. The assigned SPC e-mail address will be used as the official channel of communication for South Plains College. The Student Correspondence Policy can be found at www.southplainscollege.edu. To access the SPC student e-mail account, login to MySPC and click the SPC Google Mail option under Campus Bookmarks. (Copied from SPC Student Guide). Since all students have an assigned SPC email, the instructor will only acknowledge, respond, and send emails to your assigned SPC email. This ensures all correspondence from the instructor is received by the intended recipient.

Phones and other electronics: All electronic devices are inappropriate. Suspected use will earn you a zero for that day's quiz or homework. If you use an electronic device (cell phone, iPad, iPod, headphones) during an exam, you will earn a zero on the exam and may be dropped from the course. Please do not use a phone or iPad as your book or calculator.

Test days: Test days are very serious days. **Once you begin the exam, you will not be allowed to leave the classroom until the exam is submitted for grading**. Use the restroom before class. Use of electronics during an exam earns you a zero on the exam and possible dismissal from the course.

Where to Get Help:
- Me! – My office hours are listed at the top of this syllabus. I am also available at some other times by appointment. Email is a great way to contact me – much faster than phone calls and messages. Sometimes I can help on email if you will send a photo of the problem you are doing. Even if I am not in the office, I can work the problem, take a photo and send back. You CANNOT ask for #35 – I won't have my book with me.
- Free tutoring and video tapes are available in M116 on the Levelland campus. The hours for tutors are posted by that door. Digital versions of the videos are available on YouTube. I will post the links to these videos on Blackboard. Occasionally I will post helpful items on blackboard such as solution sets. **If you are not familiar with Blackboard, you should become familiar**. Login at http://spc.blackboard.com. The user name and password should be the same as the MySPC and SPC email.
  User name: first initial, last name, and last 4 digits of the Student ID

Password: Original CampusConnect Pin No. (found on SPC acceptance letter)
- Your book is a great resource and it is already purchased!
- You can also seek videos from www.patrickjmt.com and www.khanacademy.org or others.
- **I also strongly recommend forming study groups so that you can work with others. Networking is an essential tool both in the classroom and in the workforce.**

You should expect to spend as much time outside of class as you do in class practicing homework problems and studying. The goal is for you to acquire the skills necessary to be successful in the following MATH course. I WILL NOT send you to the next course if you cannot demonstrate that you have those skills.

Academic Honesty: You are expected to uphold the ideals 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.

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. (copied from current South Plains College Faculty Handbook)

Disabilities 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 Center 806-716-2577, Reese Center (also covers ATC) Building 8: 806-716-4675, Plainview Center Main Office: 806-716-4302 or 806-296-9611.

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, sexual orientation, disability, or age.

Communication Skills: effective development, interpretation, and expression of ideas through written, oral, and visual communication.
> Develop, interpret, and express ideas through written communication
> Develop, interpret, and express ideas through oral communication
> Develop, interpret, and express ideas through 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 Competency Skills: the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.
> Manipulate and analyze numerical data and arrive at an informed conclusion
> Manipulate and analyze observable facts and arrive at an informed conclusion

Revised 8/27/2016

Precalculus Tentative Course Outline
MATH 2412.003 (T/Th 2:30-4:35)
Fall 2016

Week	Day	Date	Topic	Assignment for next class
1	Tues	Aug 30	R.1 Linear Equations and Apps R.2 Complex Numbers R.3 Quadratic Equations R.4 Other Types of Equations	Assignment 1
	Thurs	Sept 1	R.4 Other Types of Equations R.5 Inequalities R.6 Rectangular Coordinate System 1.4 Basic Graphs	Assignment 2 Assignment 3
2	Tues	Sept 6	2.1 Quadratic Equations 1.1 Graphs of Equations	Assignment 4
	Thurs	Sept 8	1.2 Functions and Function Notation 1.3 Graphs of Functions	Assignment 5
3	Tues	Sept 13	1.5 Transformations of Graphs 1.6 Operations on Functions 1.7 Inverse Functions	Assignment 6 Assignment 7 AAAAND Study
	Thurs	Sept 15	**Unit 1 Exam**	
4	Tues	Sept. 20	3.1Exponential Functions and Graphs 3.3 Logarithmic Functions and Graphs 3.5 Properties of Logarithms	Assignment 8
	Thurs	Sept 22	3.6 Exponential and Logarithmic Equations 2.3 Rational Zeros of Polynomial Functions	Assignment 9
5	Tues	Sept 27	2.4 Roots of Polynomial Functions 2.2 Polynomial Functions	Assignment 10
	Thurs	Sept 29	2.5 Rational Functions 8.1 Systems of Linear Equations	Assignment 11
6	Tues	Oct 4	8.2 Gaussian Elimination and Matrix Methods 8.5 Determinants and Cramer's Rule	Assignment 12
	Thurs	Oct 6	4.1 Angles and Measurement 4.2 Unit Circle and Trig Functions	Study (4.1, 4.2 not on Exam 2)
7	Tues	Oct 11	Ex 2	Assignment 13
	Thurs	Oct 13	4.3 Trig Functions of Any Angle 6.1 Right Triangles 6.3 Law of Sines	Assignment 14
	Fri	Oct 14	*Fall Break*	
8	Tues	Oct 18	6.4 Law of Cosines	Assignment 15
	Thurs	Oct 20	6.2 Triangle Applications 6.6 Linear and Angular Velocity	Assignment 16
9	Tues	Oct 25	4.4 Graphs of Sine and Cosine 4.5 Graphs of tan, cot, sec, csc	Study (Graphing not on Exam 3)
	Thurs	Oct 27	Ex 3	Assignment 17
10	Tues	Nov 1	4.3 Trig Functions of Any Angle 5.3 Verifying Trig Identities	Assignment 18
	Thurs	Nov 3	5.3 Verifying Trig Identities 5.1 Inverse Trig Functions	Assignment 19
11	Tues	Nov 8	5.4 Sum and Difference Formulas 5.5 Double-Angle, Power-Reduction, Half-Angle Formulas	Assignment 20

	Thurs	Nov 10	5.5 Double-Angle, Power-Reduction, Half-Angle Formulas 5.6 Product-to-Sum and Sum-to-Product Formulas	Assignment 21
	Thurs	Nov 10	*Spring Registration Opens*	
	Fri	Nov 11	*Advising Day for Math, CS and Engineering Majors*	
12	Tues	Nov 15	5.7 Trig Equations I 5.8 Trig Equations II	Assignment 22
	Thurs	Nov 17	Rev	Study
	Thurs	Nov 17	*Last Day to Drop a Course*	
13	Tues	Nov 22	EX 4	Assignment 23
	Thurs	Nov 24	No class	Assignment 24
14	Tues	Nov 29	7.4 Vectors 7.5 Dot Product	Assignment 25
	Thurs	Dec 1	10.2 Sequences, Series, Summation Notation 10.3 Arithmetic Sequences and Series 10.4 Geometric Sequences and Series	Assignment 26
15	Tues	Dec 6	7.1 Polar Coordinates 7.2 Polar Equations and Graphs 7.3 Complex Plane, Polar Form	Assignment 27
	Thurs	Dec 8	Comprehensive Review Questions	Study
16	Tues	Dec 13	**1:00-3:00**	