Math 1314 Syllabus
College Algebra
Spring 2019 Sul Ross State University

Secs. **003**, **ALP**, **HF1**:	Tue, Thu: 11a-12:15p in ACR 204
Instructor:	Dr. Kris Jorgenson
Office:	ACR 109D
Phone:	(432) 837-8398 during office hours
E-mail:	kjorgenson@sulross.edu
Office Hours:	Mon thru Thu: 10-11a, 3:30-4:30p; Fri: 10a-12p
	also available by appointment

Course Description: The prerequisite is Math 0301 or a satisfactory score on a Mathematics Placement Exam. This is a university-level algebra course for students who plan to take calculus. Topics include linear and quadratic equations and functions, inequalities, graphs and zeros of functions, complex numbers, exponential and logarithmic functions, matrices and vectors.

This course satisfies 3 hours of math requirements of the Core Curriculum.

Students who are required to take Math 1314 include those planning to take

(**1**) **Calculus 1** (**Math 2413**, **which has the additional prerequisite of Math 1316**);

(**2**) **Business Calculus** (**Math 1325**);

(**3**) **Foundations of Elementary Mathematics 1** (**Math 2310**);

(**4**) **Computer Science and many other Bachelor of Science Degrees–check with your advisor**.

Student Learning Objectives Successful students will demonstrate correct understanding and knowledge of the algebra topics including but not limited to those of the Course Description. Particular emphasis will be placed on the order of operations and the algebra and language of functions. Students will apply concepts and problem-solving methods to different problem-solving situations. Students will demonstrate correct knowledge of the difference between numbers (perhaps in the context of another mathematical object such as a function or algebraic expression) that are in exact form and numbers that are approximate and will be able to report numbers in exact form and with a correct approximation when required. Students will express their solutions clearly in writing using complete sentences when appropriate.

Required Materials: Textbook: College Algebra, 6th edition by Blitzer, ISBN-13: 978-0-321-78228-1.

Scientific Calculator: There will be some need of a scientific calculator, which has buttons with denotations such as y^x, a^b, ^, e^x, LN, LOG, but use of a calculator will not be a large part of this course. A calculator may be used to check arithmetical calculations throughout the semester. Appropriate scientific calculators cost usually $8-$30 each. Any graphing calculators (for example the TI-83, TI-84, TI-89 or TI-92) **are not allowed**.

Class Materials: Students are expected to be prepared in every class with pencils and paper in some sort of organized notebook for taking notes of lecture content and examples, and for homework. You are required to be involved in class activities every class day. This

will be part of your grade. At the beginning of each new unit, I will post on Blackboard the assignments and lecture slides for the unit. You need to print out a copy of this unit assignments/lecture slides packet and bring it to every class.

Blackboard: Also you are required to have access to Blackboard and have an e-mail address that you check regularly be your e-address registered in Bb since I will regularly need to contact you outside of class with important information.

Grading and Assignments: The assignments discussed below will help students achieve all of the Learning Objectives mentioned previously through active learning and assessment. Your total grade will break down as follows:

Daily Grade (**DG**) is worth **30**% and consists of **Class Study Grades** (**CSG**) **15**% and **Quizzes 15**%. The **Test Average** worth **70**% will be based on 3 in-class, unit tests.

Once or twice a week, students will be told which of the assignments they should be concentrating on to finish during the coming week. It is very important that you keep up with these homework assignments in your notebook On average, students should make it a goal to complete and understand 3-5 homework exercises each day. Students will usually have 3 or more **in-class quizzes** prior to each test. On days in which there is no in-class quiz or test, students will receive **CSG credit** based on attendance, class participation, and in-class work. Students will receive a Daily Grade in every class except test days and the 1st day of the semester. The homework assignments will be the basis for the in-class quizzes and tests. Students may use their homework notebook during the in-class quizzes, but not the in-class tests. This course requires a mature attitude since the HW notebook is NOT taken up for a grade and yet every in-class quiz and test IS based on these same HW problems.

There will be **3 Unit Tests** each based on the corresponding Unit Assignments. Each of these tests will count in your **test average**. However as a bonus to you, your highest test grade will count twice. Therefore, you will have 4 test grades in all.

Students may not use any notes or books during the tests: only pencil(s)/eraser(s) and scientific calculator can be used on the tests. Sufficient paper will be provided. The dates for the Unit Tests are as follows.

Test 1	**Thu**, **Feb**. **21**
Test 2	**Thu**, **Apr**. **4**
Test 3	**Mon**, **May 13**: **10**:**15a**-**12**:**15p**

Smarthinking online tutoring In Blackboard for this course, there is a link to Smarthinking online tutoring (Alpine campus undergraduate). You may use this to get **24/7 tutoring help on your homework**, **correct quizzes and tests for free**. Please use this and print out your tutoring session and bring to me to discuss, so that I may be sure that you are benefitting the most from this free tutoring resource.

General (**But Important**) **Policies**

Late Work, **Rescheduled Quizzes/Tests** No late homework will be accepted, but I will accept homework (which might arise if we have a take-home quiz) as long as it is handed in by 5 pm on the due date. To take an in-class quiz or test at a time other than the scheduled time, you must notify me of this absence ON OR BEFORE THE DAY MISSED, and you must satisfy one of two requirements: either (1) supply a written medical excuse signed by a medical professional for the day of the absence, or (2) your excuse is for a university

activity, in which case you must notify me of this authorized absence in writing with your name, the name of your organization and the date(s) of your absence, and your name must appear on a published explained absence list that I am provided (or this is verified by a faculty sponsor). Also, you and I must set up a time for you to make up the quiz or test within a reasonable time period (not more than 1-3 days) before or after the time of the missed grade. Usually I will let you make up a grade according to the above conditions if it is due to another one-time occurrence, such as the care of someone else in your family or a friend, or for a work-related excuse as long as you can document your absence and you let me know BY THE DAY OF THE ABSENCE AT THE LATEST. A CSG may also be made up with me in my office if you follow the above policy.

Attendance I will be taking attendance as university policy precludes you from missing more than 5 classes for anything other than authorized university activities since you cannot miss 3 weeks of classes (6 classes). To excuse an absence for a university activity, in addition to letting me know of the absence by the day of the absence (as explained previously) you must also spend at least 60 minutes outside of class on this course with me or with a tutor, but the tutor will need to sign a note that documents this made-up time. Also I will allow you to excuse a test day for a documented medical absence as long as you also make up the test with me. If you have 6 or more unexcused absences, I reserve the right to drop you from this class with a grade of 'F', which is university policy.

Good Advice Concentrate on learning the material of the course rather than worrying about your grade. Your time is best spent concentrating on the material to be learned in the impending assignments, asking questions, and devoting yourself to activities that will help you learn the material and do better in the course. I will worry about the details of your grade since you doing so does not help you earn a higher grade. But learning the material and doing well on the tests *will* help your grade. **Remember that math is not a spectator sport**, so the more problems you work yourself and the more practice you get, the more confident you will be, and the better you will do in this course. Working on the problems helps you to figure out what your specific questions are. Remember an individual homework or quiz grade may not account for a lot in your overall grade, but working and learning from the homework is **essential** because this is where you learn the topics that will appear on the tests, which do count for a lot of your grade. The best lessons learned often come from correcting quiz or homework problems in which you have made a mistake.

More Good Advice

Keep absences to a minimum. You never know when you might miss something you will find important either from the lecture or class discussion such as questions other students ask. Remember: YOU ARE RESPONSIBLE FOR EVERYTHING THAT IS DISCUSSED DURING CLASS WHETHER YOU ARE PRESENT OR NOT.

Also do not allow yourself to develop bad habits such as missing classes. It's human nature to be controlled by our habits, so once you develop a weekly habit for the semester, it can be hard to break this habit. So be sure that you allow the necessary time for this course, ESPECIALLY if you consider mathematics not to be your best subject. If you have trouble in math, then you should attend EVERY class of a college mathematics course. Not showing up to class or not doing the required work will not cause this class to "go away". If you are not understanding the material and/or have fallen behind in your work, missing class will not help. Making mistakes or falling behind is natural, so it is best in this case to come to class and talk to me about this. If you do have to miss, let me know before class,

and plan to come and see me and make an appointment to discuss what was missed and pick up assignments or discuss what you are not understanding. It is essential to get your questions answered, which you are welcome to do in my office. However meeting in my office is not a substitute for attending class.

Ask questions no matter how easy or trivial they may seem. There is no such thing as a bad or silly question. Questions result when you are interested and have been thinking about areas, such as mathematics, in which you have some limitations in your educational background. Being in a college mathematics course means you will have questions both obvious and more subtle. Asking questions is a very important part of learning.

Study and work problems regularly–every day or at least every other day. Work on assignments discussed in class as soon as you can after class while the methods discussed are still fresh in mind. You can't expect to succeed in a math course by waiting till the last minute to only study and cram prior to a test. If you promise yourself you will study for ½-hour, get into the work, forget the clock, then the next thing you know, you've studied and worked for one or two hours.

Classroom Conduct It is important to conduct yourself in a college classroom so that everyone can benefit from good communication between instructor and students. My goal is to create an environment in which everyone can do their best work, learn, and make the best grades possible.

I think you will find that I am a very friendly, sympathetic, and generous instructor as long as you are sincerely working to succeed in this course and certain guidelines for classroom behavior are followed during class to allow a sanctity of study for your fellow students. Classroom habits such as holding conversations during lecture, or being engaged in activities not related to this course such as working on a different course or reading a newspaper will work against the goal of this course and cause you to be counted absent and you will lose Daily Grade credit. Also engaging with electronic communication devices of any kind during class or coming into class more than 5 minutes late or leaving early before class is dismissed circumvent the goals of this course and cause you to lose credit. My sympathy and generosity will quickly evaporate if I find that you are working against the goals of the course or that you are simply trying to get a good grade without learning or without honestly doing the required work. I want you to have every opportunity to succeed in this course.

Please be aware of the rules for Academic Honesty that you will find in the Sul Ross Student Handbook and building codes prohibiting food, beverages, tobacco (smokeless or otherwise) in the classroom. Use commonsense to think of anything else that will allow you to learn and do the best work that you can in this class, and for me to better help you do your best work. Remember that being registered for this course does not allow you to behave in any manner you wish during class. You must keep other people in mind. It is within university policy for me to send a student out of this class on a temporary or permanent basis if disruptions or interruptions like the types listed above persist.

Equal Access and SRSU Disability Services:

Sul Ross State University is committed to equal access in compliance with the Americans with Disabilities Act (ADA) of 1973. It is the student's responsibility to initiate a request for accessibility services. Students seeking accessibility services must contact Mary Schwartze-Grisham, M. Ed., LPC., in Counseling and Accessibility Services, Ferguson Hall, Room 112. The mailing address is P.O. Box C-122, Sul Ross State University, Alpine,

Texas. Telephone: 432-837-8691. e-mail: mschwartze@sulross.edu .

This course is supportive of the Program Learning Outcomes for the Bachelor of Science degree in Mathematics:
The graduating student will demonstrate that he/she is able to:

- Apply knowledge of basic mathematics principles;
- Identify and provide valid proofs or solutions for theorems and problems;
- Recognize and dispute invalid mathematical statements using counter-examples.

and:
EC-6 Core Teacher Competencies:

Competency 013 (Mathematics Instruction) The teacher understands how students learn mathematical skills and uses that knowledge to plan, organize and implement instruction and assess learning.

Competency 014 (Number Concepts and Operation) The teacher understands concepts related to numbers, operations and algorithms and the properties of numbers.

Competency 015 (Patterns and Algebra) The teacher understands concepts related to patterns, relations, functions and algebraic reasoning.

Competency 016 (Geometry and Measurement) The teacher understands concepts and principles of geometry and measurement.

Competency 017 (Probability and Statistics) The teacher understands concepts related to probability and statistics and their applications.

Competency 018 (Mathematical Processes) The teacher understands mathematical processes and knows how to reason mathematically, solve mathematical problems and make mathematical connections within and outside of mathematics.

Important Dates

Tue, January 22	First day of classes, first day of late registration
	and schedule changes
Fri, January 25	Last day for late registration and schedule changes
Wed, February 6	Last Day to Drop with No Record, 12th class day
March 18-22, Mon.-Fri.	Spring Break, No Classes
Fri, April 12	Last day to withdraw from Univ. or drop a class
	with a grade of "W" by 4 pm in Registrar's Office
Fri, April 19	Good Friday Holiday, No Classes
Wed, May 8	Last Day of Regular Classes
Thu, May 9	Dead Day, No Classes
Fri, Mon-Wed, May 10, 13-15	Final Exams, End of Term

Math 1314 College Algebra Secs. 3, ALP, HF1--Tentative Course Outline--Spring 2019		
	Tue	Thu
Jan. 22, 24	Graphs Real Numbers Functions	Polynomials Polynomial Ops Order of Operations
Jan. 29, 31	Equations Radicals Absolute Values	Inequalities Multi-Part Functions
Feb. 5, 7	Rational Exponents	Rational Exponents Linear Applications
Feb. 12, 14	Lines, Slope	Parallel, Perpendicular Lines
Feb. 19, 21	Test 1 Review	**Test 1**
Feb. 26, 28	Absolute Value Inequalities	Factoring Polynomials Complex Numbers
Mar. 5, 7	Complex Numbers Quadratic Equations	Quadratic Equations Rational Equations
Mar. 12, 14	Distance, Circles	Circles Quadratic Functions
	Spring Break March 18-22 ----->	
Mar. 26, 28	Quadratic Functions Matrices, Vectors	Matrices, Vectors
Apr. 2, 4	Test 2 Review	**Test 2**
Apr. 9, 11	Composition of Functions Inverse Functions	Inverse Functions
Apr. 16, 18	Exponential Functions	Logarithmic Functions
Apr. 23, 25	Log Properties Applications	Log Equations, Applications
Apr. 30, May 2	Exponential, Logarithmic Applications	Exponential, Logarithmic Applications
May. 7	Test 3 Review	X - Dead Day
May. 13	**Test 3 Mon. May 13 10:15a-12:15p in ACR 204**	