TEXAS STATE UNIVERSITY

The rising STAR of Texas

Mathematics 1315: College Algebra

Course description (from catalog): A course covering linear and quadratic equations, inequalities, word problems, functions, logarithms, systems of equations and other college algebra topics as time permits.

Instructor: Mr. Shane Lowe

Course section number: Math 1315 section *Correspondence*

Classroom: Since this class is a self-paced online course, there will not be any scheduled meetings or classroom associated with the course

Instructor's office number: Elliot B218

Departmental phone: 512 245 4753

Email: SL1269@txstate.edu

Office hours: *(Office hours may change between semesters)*

- All correspondence students can email me to schedule an appointment or meet me in my office during the current semester's office hours. Appointments will be scheduled to accommodate both our schedules.
- Fall 2020 scheduled office hours: MW – 12-1:30 p; TR – 1-3p or by appointment. (In person or on Zoom.)
- Office hours will be held in Elliot B218. However, if we schedule an appointment, we may meet in my personal Zoom room. (Meeting ID: ***490-465-2628***)

General Education Core Curriculum (Code 020)

Mathematics Component Outcomes

Students will interpret key mathematical concepts and apply appropriate quantitative tools to everyday experience.

Core Objectives/Competencies Outcomes:

- **Critical Thinking**
  - Students will demonstrate creative thinking, innovation, inquiry, and analysis, evaluation, and synthesis of information.
- **Communication**
  - Students will effectively develop, interpret, and express ideas through written, oral and visual communication.
- **Empirical and Quantitative Skills**
  - Students will manipulate and analyze numerical data or observable facts resulting in informed conclusions.

Additional department or instructor course outcomes (optional):
The goal of College Algebra is to provide an opportunity to learn algebra concepts and develop algebraic problem-solving skills. The goal will be achieved by meeting the following. The student will be able to:

- Solve equations and inequalities (linear, quadratic, polynomial, exponential, and logarithmic).
- Develop the concept of a function (inverse, rational, polynomial functions).
- Understand related functions through symmetry, transformations, and operations with functions.
- Solve systems of equations (linear and nonlinear).
- Operate with matrices and complex numbers.
- Translate real world situations into mathematical models.
- Use a graphing calculator as a tool for thinking about algebraic concepts.

Brief Course Outline – During the semester, this course will cover sections from chapters 1 through 6 of the text. Supplemental material from other sources may also be covered as well as additional topics intended to preview material that will be covered in future mathematics courses.

Course Materials –

The following materials are required:

- **Textbook:** *College Algebra,* Miller, J. and Gerken, D., 2nd ed. (The e-book provided on www.ALEKS.com will be acceptable.)
    - A hard copy of the textbook is available through the University Bookstore. ***Note:*** On the bookstore website, **select "ODEL" as the department**.

- **ALEKS Account:** You can register for an ALEKS account (and purchase the access code) by visiting https://www.ALEKS.com and selecting the yellow "New Student?" button (under the log-in box on the left of the screen). The course code for ALEKS is **CKATG – Q9LCJ**. Since this course is a six-month course, make sure to purchase access for at least six months (or between 24 and 26 weeks), otherwise your access could end before you complete all homework assignments.
    - If you are re-enrolling in the course, please contact me and ask me to schedule a knowledge check. The knowledge check will help ALEKS determine how much material you remember from your previous enrollment.

- **Scientific Calculator:** During tests, you will not be allowed to use a graphing calculator or any calculator on a device that can connect to WiFi (or is blue-tooth capable), including your cellphone. The ***TI 30XIIS*** is an inexpensive scientific calculator that will meet the needs of this course.
    - **COVID-19 Adjustment:** During the COVID pandemic, you will be allowed to use any calculator on the alternative form of the exams. (Does not change the requirement for taking the test at a testing center.)

- **Printer and Scanner:** The "Real-World" and Extension Assignments will require you to print and scan documents so you can submit the assignments on Canvas. If you do not have a printer and/or scanner, you may be able obtain access to a printer or scanner at:
    - Your Public Library. Many libraries offer printing and scanning services, check if your library offers these services before completing the first project.
    - Computer Labs on the Texas State Campuses. If you are on campus, you can visit any computer lab and print the documents. You may need to ask if the computer lab you are at has access to a scanner.

- Downloadable Apps. There are apps that can be downloaded that will convert your pictures into a PDF file. A few of these Apps are Adobe Scan and CamScanner. (I believe these Apps are no charge.)
- Commercial Copy Centers such as Staples or FedEx Offices.

All scans must be submitted as pdf files, and the student will be responsible for ensuring the scanned file is sufficient quality for clear printing. Scans not of sufficient quality **will be returned**.

- **Web Browser and Internet Connection:** The lessons, quizzes, discussions, and submitting assignments will be done on Canvas, which will require you to access the Canvas site using an internet connection. (ALEKS work will also be done online.)

The following materials are *highly recommended*:

- **Notebook for ALEKS Journal and Notes:** Having an ALEKS journal will help organize your work on ALEKS and provide you with an extra resource to help study for the exams. The journal can be a spiral notebook or 3-ring binder.

Grading –

Your final course grade will be calculated from the following learning opportunities (this course will have 1400 total points):

Quizzes (160 points) – There is a syllabus quiz and 12 short vocabulary-based quizzes in the course. All quizzes will be taken and submitted on Canvas.

ALEKS Work (165 points) – There is an assignment on ALEKS that is associated with each of the 15 lessons. You will have an unlimited number of attempts to achieve the desired ALEKS grade by learning as many topics as possible.

"Real-World" and Extension Assignments (400 points) – In addition to completing an assignment on ALEKS for each lesson, there are 8 "Real-World" and Extension assignments that will be submitted on Canvas. Each of these assignments are designed to reinforce certain concepts from the lessons. The reinforcement will be done with questions that inspire critical thinking and questions based on situations outside the classroom. ***Note:*** *To receive the full benefit of the "Real-World" and Extension assignments, you are only allowed to submit two of these assignments within a seven-day period.*

Discussion Posts (75 points) – Throughout the semester you, will be asked to respond to a mathematical prompt and/or self-reflective prompt in writing. These prompts are designed to help make and reinforce connections within the course. The discussions will be submitted under the discussions tab on Canvas.

Mid-Course Exam (250 points) – The mid-course exam will be 25 questions inspired by the homework, quizzes, and "Real-World" and Extension assignments associated with the first 8 lessons. (Real and Complex numbers through Inequalities). You will be eligible to take the mid-course exam after you earn a score of 80% or higher on all ALEKS assignments associated with lessons 1-8 AND submitted the first 4 "Real-World" and Extension assignment. *(Only scientific calculators will be allowed during the exam.)*

- This exam will be taken in a proctored testing environment. You must submit your request to take this exam at least five business days before the desired exam date. (The student is responsible for coordinating arrangements with the Office of Distance and

Extended Learning and for emailing the instructor to receive approval that all requirements have been met.)

- **COVID-19 Adjustments:** Due to the COVID-19 pandemic and many testing centers limiting appointments, there is an alternative mid-course exam that will be administered through Canvas. This alternative assessment will still be timed and will be open notes (does not include online resources, "math-solving" apps, or other people). Since this exam is open notes, no formulas will be provided (make sure all formulas you wish to use are in your notes).

Final Exam (350 points) – The final exam will be 35 questions inspired by the homework, quizzes, and "Real-World" and Extension assignments associated with the entire course (**comprehensive**). You will be eligible to take the final exam after you earn a score of 80% or higher on all ALEKS assignments AND have submitted all "Real-World" and Extension Assignments. *(Only scientific calculators are allowed during the exam.)*

- This exam will be taken in a proctored testing environment. You must submit your request to take this exam at least five business days before the desired exam date. (The student is responsible for coordinating arrangements with the Office of Distance and Extended Learning and for emailing the instructor to receive approval that all requirements have been met.)
- **COVID-19 Adjustments:** Due to the COVID-19 pandemic and many testing centers limiting appointments, there is an alternative mid-course exam that will be administered through Canvas. This alternative assessment will still be timed and will be open notes (does not include online resources, "math-solving" apps, or other people). Since this exam is open notes, no formulas will be provided (make sure all formulas you wish to use are in your notes).
- **Time Between Exams:** Due to the restriction of turning in at most 2 "Real-World" and Extension assignments in any seven-day period, you are required to wait at least two weeks after the mid-course exam to request to take the final exam.

Letter grades – Letter grades will be assigned by accumulating the following points:

A – 1260 points; B – 1120 points; C – 980 points; D – 840 points; F – less than 840 points

NOTE: *You must score at least a 60% on the final (210 points) and complete 90% of the ALEKS work to pass this course. (This condition will override your point total!)*

Course Organization –

This course will be organized into modules that will guide you through all activities. The modules can be accessed using the "Modules" tab on Canvas. You will be required to complete each module in order and the activities for each module must be completed in order.

Get-Started Module – This module is designed to help you familiarize yourself with the course requirements, expectations, and Canvas site.

Lesson Modules – This course has about 15 modules that are considered lessons. Each of these lessons will be broken into 4-5 sections.

- **The "Lowe" Down** – This section is the introduction to the main concept and will include the objectives you are expected to learn for each lesson.

- **Key Terms** – Since mathematics can be considered a foreign language, each lesson will have a section introducing you to vocabulary terms and/or formulas that will be used in the lesson.
- **Quizzes** – This page will direct you to the quiz associated with the lesson (if applicable). The quiz must be submitted before moving on in the lesson. Once the quiz is submitted, you can access the feedback from the grades tab or the quizzes tabs (you will only be able to access the quizzes that you have unlocked in the modules)
- **Explanations and Examples** – This is the main bulk of the lesson. You can consider this page as your "online classroom". From here, you will have access to explanations and example problems. You are expected to review these explanations before completing the homework. This page will also direct you to the section of the textbook where you can find alternative explanations.
- **ALEKS Assignment** – This page will inform you of which assignment you need to complete on ALEKS for each lesson.
- **Discussion Posts** - This section will direct you to the prompt for the lesson. Each prompt is designed to help make connections between concepts and/or be self-reflective. To complete each discussion, you will be asked to write a short response to the prompt. The prompts will be graded on how well your response addresses the prompt. (To avoid answers being repeated after the first post, you will not see any posts until your response is posted. After posting your response, you *will not be required* to respond to other posts. However, if you want to respond, feel free to do so. I just ask you to be respectful of each other's posts)

Netiquette: It is important that you are respectful to everyone in the course. Behind a screen, it can easily feel like a living, breathing human with feelings is not on the receiving end of your commentary. Please think before you post. What you may mean to say as a joke with levity will not always come across that way without the nonverbal cues attached. Anything posted with hateful, hurtful, or malicious intent will not be tolerated. The intent of the messages will be based on my observation and opinion. There is zero tolerance policy for this. This kind of speech is a violation of the Honor Code and you will automatically receive an F in the course.

"Real-World" Modules - These modules will help identify when each "Real-World" and Extension assignment needs to be completed. The assignment will need to be submitted before the next lesson module is unlocked. Once the assignment is unlocked in the modules, the feedback can be accessed from the grades tab or the assignments tab.

Exam Modules – These modules will identify when you are ready to study for and take the mid-course and final exams.

ALEKS

Introduction to ALEKS:

ALEKS is the online homework (and practice) system that will be used in this course. The "Lowe" Down on ALEKS video (in the get started module) will provide a brief walk through of the ALEKS system and how to work in ALEKS.

The MATH 1315 Correspondence Course on ALEKS will be divided into 15 objectives with approximately 10-20 topics in each objective. When working in ALEKS, the overall goal will be to demonstrate mastery of all topics. Demonstrating mastery is done with the following steps.

1. *Learning each topic*. A topic is learned by working in the learning mode and filling the progress bar at the top of the page for each topic. When in learning mode, you will first be given a problem worked out with an explanation. Then you will be asked a series of questions. Answering the questions correctly will fill the progress bar, however, answering the questions incorrectly will empty the progress bar. (You may go back to the explanation page at any time during this process.)
2. *Complete a knowledge check*. Once you have learned at least 20 topics and spent at least 5 hours working in ALEKS, you will be given a progress knowledge check. The progress knowledge check will ask 20-25 questions (more if you delay starting the knowledge check). Answering the knowledge check questions correctly will cause the learned topics to be mastered. Answering the questions incorrectly (or selecting "I Don't Know") will cause the learned topics to become a topic in the "needs more review" section. (Topics in this section will have to be re-learned in the learning mode.)

Your ALEKS grade for this course will be based on the percentage of topics that have been ***mastered***.

Creating an ALEKS Account:

You can register for an ALEKS account (and purchase an access code) by visiting https://www.ALEKS.com and selecting the yellow "New Student?" link (under the log-in box on the left of the screen). The course code for ALEKS is **CKATG - Q9LCJ.** Since this course is a six-month course, make sure to purchase access for at least six months (or 24-26 weeks), otherwise your access could end before you complete all homework assignments.

- If you are re-enrolling in the course, please contact me and ask me to schedule a knowledge check. The knowledge check will help ALEKS determine how much material you remember from your previous enrollment.

Getting started in ALEKS:

ALEKS is different from most online homework systems. Instead of just assigning problems and having you complete them, ALEKS uses a learner-adaptive system. Using a learner-adaptive system means that ALEKS will only ask you to complete the topics that you do not know (or may not know) based on your work in the system. So, getting started in ALEKS will begin by creating your ALEKS account and registering for the MATH 1315 correspondence course.

Once you are registered, ALEKS will try to determine what topics you already know by asking you to complete two items.

- *Tools Tutorial*: The tools tutorial will walk you through how answers are entered into ALEKS, including how to graph in ALEKS.
- *Initial Knowledge Check*: The initial knowledge check will be an ungraded assessment to determine how many of the course's topics you already know. The initial knowledge check will consist of 30 questions from all topics associated with the course.
    - *Take the Initial Knowledge Check seriously*! This knowledge check will affect how much work you will need to complete during the course. If you select "I don't know" for all the questions, you will start with 0 topics learned. Similarly, if you look up and get help with every question, you will not receive the appropriate amount of practice for the topics that are challenging for you, which leads to failing the exams. (It is recommended to spend about 1-1.5 hours on the initial knowledge check)

Working in ALEKS:

Working in ALEKS will be done in the learning mode. ALEKS is set-up where entering the course page and selecting "Continue my Path" will enter the learning mode. In the learning mode, ALEKS will provide you with the topics that the system feels you are ready to learn. (However, it is possible that your ready to learn topics do not coincide with the objective associated with the lesson you are completing.) Some of these ready to learn topics will be required to unlock the current objective topics (the "Lowe" Down on ALEKS describes how to identify these topics).

To only work on the topics associated with a specific objective, open the topics list and select the objective you want to complete (the "Lowe" Down on ALEKS demonstrates how to identify the objective you want to complete).

While working in the learning mode, ALEKS will regularly check how much you are retaining, and any topics for which you may need more practice. ALEKS does this check with progress knowledge checks. A progress knowledge check is like the initial knowledge check except the progress knowledge checks are only 20-25 questions over the topics you have recently learned. Based on your performance on the progress knowledge check, you may have to "re-learn" a topic or some of the future topics can be mastered without having to complete them.

A progress knowledge check will be triggered when you learn at least 20 topics AND spend at least 5 hours in ALEKS since the last knowledge check. If you spend 10 hours in ALEKS (since the last knowledge check), ALEKS will also trigger a knowledge check without considering the number of topics learned. It is highly recommended to take the progress knowledge checks when they show up without delaying the start. If you delay the start, the knowledge checks will become 30 questions and will cover more topics.

- You can always request me to schedule a knowledge check if you feel that the number of topics mastered on ALEKS is too low or too high. Requesting and completing the knowledge check can adjust the number of topics mastered without having to wait for the progress knowledge checks

Academic Integrity

The Mathematics Department requires all students and faculty involved in the program to adhere to the Texas State Academic Honor Code and the Code of Student Conduct.

The Texas State Academic Honor Code applies to all Texas State students, including correspondence students. The Honor Code serves as an affirmation that the University demands the highest standard of integrity in all actions related to the academic community. As stated in the Texas State Student Handbook, Violation of the Honor Code includes, but is not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials.

Students Requiring Accommodations

The Office of Distance and Extended Learning is committed to helping students with disabilities achieve their educational goals. A disability is not a barrier to correspondence study, and we provide reasonable accommodations to individuals in coursework and test taking. Students who require special accommodations need to provide verification of their disability to the Office of Disability Services, Suite 5-5.1 LBJ Student Center, 512.245.3451 (voice/TTY).

Students should then notify the Office of Distance and Extended Learning at corrstudy@txstate.edu of any disability-related accommodation needs as soon as possible to avoid a delay in accommodations.

Resources for tutoring or help with homework (Available on Zoom)

Math CATS – Derrick 233 (see website for times)
SLAC – 4th floor of Alkek (see website for times)

Course Calendar

Filling out and submitting the course pacing guide on canvas will provide you with schedule for this course.