

MATH 1314-31 College Algebra (ALEKS) Syllabus for Fall 2017

Time: Tuesday and Thursday 10:50am-12:05pm

Classroom: EACSB 2.120

Instructor

Name: Dr. Sergey Grigorian

Office: EMAGC 3.426

Phone: 665-2361

E-mail: sergey.grigorian@utrgv.edu

Office hours: Tuesday and Thursday 4:00pm-5:30pm in EMAGC 3.426, or by appointment

Course Description: Topics include nonlinear and absolute value inequalities, functions, complex numbers, polynomial and rational functions, exponential and logarithmic functions, system of linear and nonlinear equations. You will need access to the Internet and the ALEKS system outside of class to complete the required work

Textbook: No textbook is required for this section of MATH 1314. Instead, you will be required to purchase an access code called ALEKS Higher-Ed (18 weeks) for the online ALEKS systems.

Your **Course Code** is: **PHHYF-VNTK9**

Your **Financial Aid Access Code** is: **7F2FC-31AEF-CBD70-A1F8A**

The Financial Aid Access Code does not add an additional two weeks to your account.

NOTE: This code gives you temporary access to ALEKS for a two-week period. Once the code expires, you will be locked out of your ALEKS account until you purchase a regular Student Access Code. **It is highly recommended that you purchase the Student Access Code BEFORE the two weeks expire** to prevent interruptions with your ALEKS account.

1. To log into ALEKS using the Financial Aid Access Code, go to: <http://www.aleks.com>.
2. Click on the "**SIGN UP NOW!**" link located under the login box on the left of the page.
3. Enter your **Course Code** in the box labeled "**Using ALEKS with a Class?**" and click on "**Continue.**"
4. Verify that you are registering for the correct course and click on "**Continue.**" Enter the 20-character Financial Aid Access Code.
5. Continue with the registration process until your account has been set up successfully.
6. After you complete your account set up you will be logged into ALEKS and can immediately begin working in the course.
7. You can extend your ALEKS account at any time by clicking on "extend your account" and entering a purchased Student Access Code. If your temporary access expires before you purchase a Student Access

Code, simply log in to ALEKS and you will be directed on how to extend your current account. You will then be able to continue your course where you left off before the temporary access expired. **You do NOT need to create a new ALEKS account to continue your course.**

Prerequisites: A student's TSI status must be College Ready in Mathematics to enroll in this course.

Calculators: During the tests, only the built-in ALEKS calculator may be used. In the Final Exam, only basic, non-programmable, non-graphing, scientific calculators will be allowed.

Notebooks: You are required to use a paper notebook to work on your assignments. This homework notebook will be a valuable study tool for this class and an important reference for subsequent classes, and will be collected and inspected at times during the semester and at the end of the semester.

ALEKS: You can only learn math by doing it. This is what the ALEKS system is all about. Throughout the semester you will be working through the course using the online ALEKS system. You will mostly be able to work at your own pace; however you will need to cover a minimum of 15 topics every week to get points for the topics goal. You won't get any points if you cover less than that. Moreover, you will need to complete a total of 5 course objectives by specified dates. You are expected to spend about 5 hours a week working in ALEKS. After completion of each objective, there will be a mandatory in-class test, also done in ALEKS.

Objectives in ALEKS

1. Review – this will review basics of working with algebraic expressions. Assessment of this course objective aligns with Student Learning Objectives 1,3,4,7 as outlined below.
2. Functions and Graphs – this covers properties of functions and their representations as graphs, and their applications. Assessment of this course objective align with Student Learning Objectives 1,2,3,4,6,7 as outlined below.
3. Polynomials – this covers properties of polynomials, polynomial equations, and inequalities. Assessment of this course objective align with Student Learning Objectives 2,3,4,5,6 as outlined below.
4. Exponential and Logarithms – this covers properties of exponential and logarithmic functions as well as their applications. Assessment of this course objective align with Student Learning Objectives 2,3,4,5,6 as outlined below.
5. Systems of Equations – this covers systems of linear and nonlinear equations as well as basics of matrices, as well as application. Assessment of this course objective align with Student Learning Objectives 1,3,4,5,7 as outlined below.

Exam: There will be a Comprehensive Final Exam held during the Exam Week. This will be aligned with all the Student Learning Objectives.

Grading:

	<i>% of the Final Grade</i>
<i>ALEKS weekly topic goals</i>	15%
<i>95% completion bonus</i>	5%
<i>ALEKS Objectives</i>	20%
<i>Tests</i>	30%
<i>Comprehensive Final</i>	30%

Grade distribution: The course grade will be assigned according to the following scale: A(90-100%), B(80-89%), C(70-79%), D(60-69%), F(below 60%).

The following are ways to get free help outside of class:

- Get free Math tutoring from Learning Assistance Center (LAC) building in Room 114 phone # 665-2532. (Edinburg Campus)
- Get free Math tutoring from Math Lab in Math building (EMAGC) in room EMAGC 1.106 (Edinburg Campus)
- Visit the Math Tutoring Lab at BSETB 1.408 (Brownsville Campus)
- Visit the Math and Natural Sciences Learning Center at Cavalry Hall; Phone number: (956) 882-7058, (956) 882-8208 (Brownsville Campus)

Make-ups: **THERE WILL BE NO MAKE-UP EXAM GIVEN.**

If a student is absent during a scheduled exam, the student must first contact the instructor to explain the excuse. In the case of a valid excuse, the missed test grade will be replaced by the final exam grade. If a student does not have a valid excuse, the grade for the missed test is a zero and cannot be replaced. If you arrive late to a test you will not be given additional time to complete the exam. Anyone arriving to a test after somebody else who took the exam has left will not be allowed to take the exam. Students missing more than one exam may be dropped from the course. With an unexcused absence, a score of 0 will be recorded for the missed exam.

Attendance policy: Attendance is **mandatory**; arriving 15 minutes late is considered an absence. If three or more absences have accumulated, the instructor has the right to drop the student from class in accordance with policies set by the University of Texas Rio Grande Valley. It is strongly advised to attend each lecture. If you do miss a class, it is your **responsibility** to determine what class work and notes were missed and make arrangements to comply with all missed assignments by yourself. On the **third absence**, the student will receive an automatic **F or will be dropped from the course**, unless approved by the instructor. Students arriving late or leaving early without prior arrangements may be recorded absent for the day.

Drop Policies: **A student may drop the course at any time before the final exam. A student wishing to drop the course must submit and sign a DROP FORM.** The forms can be obtained at the Registrar's Office or at the Department's Secretary Offices. Remember that it is the responsibility of the student to follow the procedure in the university catalog for dropping a course.

Classroom Behavior:

- All cell phones must be turned off and put away before you enter the classroom. No cell phone use allowed in class.

- Once in class, a student is expected to remain in class for the duration of the class. If a student needs to leave class early, than the student needs to discuss the situation with the instructor before class begins.
- During class students are expected to be courteous to the instructor and other classmates. Examples of discourteous behavior are unnecessary talking, sleeping, tardiness, leaving class while instructor is lecturing, sharpening pencils during the lecture, etc.
- No food allowed in the classroom.
- Chronic tardiness and discourteous behavior will not be tolerated and is cause for a student's dismissal from class for the remainder of the semester.

Calendar of Activities

The UTRGV academic calendar can be found at <https://my.utrgv.edu/home> at the bottom of the screen, prior to login. Some important dates for Fall 2017 include:

August 28	First day of classes
August 31	Last day to add a course or register for fall 2017
September 4	Labor Day – NO classes
November 15	Last day to drop a course; will count toward the 6-drop rule
November 23 – 26	Thanksgiving Holiday – NO classes
December 6	Last day of classes
December 7	Study Day – NO class
December 8 -14	Fall 2017 Final Exams
December 15-16	Commencement Ceremonies

Special Accommodations: If you have a documented disability (physical, psychological, learning, or other disability which affects your academic performance) and would like to receive academic accommodations, please inform your instructor and contact Student Accessibility Services to schedule an appointment to initiate services. It is recommended that you schedule an appointment with Student Accessibility Services before classes start. However, accommodations can be provided at any time. **Brownsville Campus:** Student Accessibility Services is located in Cortez Hall Room 129 and can be contacted by phone at (956) 882-7374 (Voice) or via email at accessibility@utrgv.edu. **Edinburg Campus:** Student Accessibility Services is located in 108 University Center and can be contacted by phone at (956) 665-7005 (Voice), (956) 665-3840 (Fax), or via email at accessibility@utrgv.edu.

Mandatory Course Evaluations Period Students are required to complete an ONLINE evaluation of this course, accessed through your UTRGV account (<http://my.utrgv.edu>); you will be contacted through email with further instructions. Students who complete their evaluations will have priority access to their grades. Online evaluations will be available:

Nov. 15 – Dec. 6 for full Fall semester courses

Scholastic Integrity As members of a community dedicated to Honesty, Integrity and Respect, students are reminded that those who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and expulsion from the University. Scholastic dishonesty includes but is not limited to: cheating, plagiarism, and collusion; submission for credit of any work or materials that are attributable in whole or in part to another person; taking an examination for

another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts. Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced (Board of Regents Rules and Regulations and UTRGV Academic Integrity Guidelines). All scholastic dishonesty incidents will be reported to the Dean of Students.

Sexual Harassment, Discrimination, and Violence: In accordance with UT System regulations, your instructor is a “responsible employee” for reporting purposes under Title IX regulations and so must report any instance, occurring during a student’s time in college, of sexual assault, stalking, dating violence, domestic violence, or sexual harassment about which she/he becomes aware during this course through writing, discussion, or personal disclosure. More information can be found at www.utrgv.edu/equity, including confidential resources available on campus. The faculty and staff of UTRGV actively strive to provide a learning, working, and living environment that promotes personal integrity, civility, and mutual respect in an environment free from sexual misconduct and discrimination.

Course Drops: According to UTRGV policy, students may drop any class without penalty earning a grade of DR until the official drop date. Following that date, students must be assigned a letter grade and can no longer drop the class. Students considering dropping the class should be aware of the “3-peat rule” and the “6-drop” rule so they can recognize how dropped classes may affect their academic success. The 6-drop rule refers to Texas law that dictates that undergraduate students may not drop more than six courses during their undergraduate career. Courses dropped at other Texas public higher education institutions will count toward the six-course drop limit. The 3-peat rule refers to additional fees charged to students who take the same class for the third time.

TSI Information: In response to a new state law, The University Texas- Rio Grande Valley has made significant changes to our educational development plan. What was once call TASP is now the Texas Success Initiative (TSI). If you are TSI-affected, you must plan enroll in, attend, and complete the course or face severe consequences, such as withdrawal from the university. If you have any question regarding this policy, contact the Advisement Center, located in the University Center (UC) room 215 or call 956-665-2529.

THECB Core Curriculum Student Learning Outcomes

1. To apply arithmetic, algebraic, geometric, higher-order thinking, and statistical methods to modeling and solving real-world situations.
2. To represent and evaluate basic mathematical information verbally, numerically, graphically, and symbolically.
3. To expand mathematical reasoning skills and formal logic to develop convincing mathematical arguments.
4. To use appropriate technology to enhance mathematical thinking and understanding and to solve mathematical problems and judge the reasonableness of the results.
5. To interpret mathematical models such as formulas, graphs, tables and schematics, and draw inferences from them.
6. To recognize the limitations of mathematical and statistical models.
7. To develop the view that mathematics is an evolving discipline, interrelated with human culture, and understand its connections to other disciplines.

College Algebra Student Learning Objectives

1. Be able to demonstrate knowledge and understanding of the mathematical characterization of relationships (functions, equations, and inequalities included) and how mathematics provides structures for critical thinking, disciplined inquiry and the formulation of discoveries and applications to real-world situations.
2. Be able to demonstrate knowledge and understanding of the mathematical concept of function, the essentials regarding their domains, correspondences, and ranges; and how to perform addition, subtraction multiplication, division, composition, and inversion of functions which are basic operations in the algebra of functions.
3. Be able to demonstrate facility with multiple representations of algebraic relationships by coordinating the use of formulas, graphs, tables, verbal descriptions, and appropriate technology, noting interconnections and providing translations between these different modes of representation.
4. Be able to demonstrate knowledge and understanding of relationships expressed through systems of equations and inequalities, and an assortment of functions - linear and nonlinear, absolute value, greatest integer, exponential, logarithmic, polynomial, and rational - which are essential for mathematical modeling and problem solving in real-world situations,
5. Be able to demonstrate an understanding of complex numbers and how they extend the real number system to provide roots for certain types of equations, and that they constitute the highest order characterization for the concept of number with the system of complex numbers including within it all of the other subsystems of numbers - real, rational, integers, whole numbers and natural numbers.
6. Be able to demonstrate an understanding of the strengths and limitations of mathematically expressed models (e.g., simple and compound interest, law of gravity).
7. Be able to demonstrate an appreciation of the contributions of mathematics to exceptional accomplishments in the sciences and humanities.

NEW UTRGV Core Objectives

Students finishing a core curriculum course will be able to demonstrate the following objectives:

CRITICAL THINKING (CT) is a habit of mind characterized by the comprehensive exploration of issues, ideas, artifacts, and events before accepting or formulating an opinion or conclusion. This definition meets the THECB's direction that critical thinking includes creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information; and is aligned with the UTRGV's SLO for critical thinking skills.

Students will learn to approach symbolic and arithmetic problems from an abstract perspective using multiple representations of problems – geometric and algebraic. Furthermore, a significant portion of the course will focus students on the application of mathematical concepts to aid in critical analysis of a variety of problems from other subjects and areas.

Student learning objectives 1, 4, 5, and 6 align with this core objective. They will be assessed through specific questions on the tests used in the course.

COMMUNICATION SKILLS (COM) include the development, expression, and revision of ideas through the effective use of language (writing, reading, speaking, and listening) across a variety of forums. Communication involves learning to work in many genres and styles while using different technologies,

can result in mixing texts, data, and/or images, and develops through diverse experiences across the curriculum. This definition meets the THECB's direction that communication skills include effective written, oral, and visual communication; and is aligned with UTRGV's SLO for communication skills.

A strong focus of this course is to develop in students the ability to discuss mathematical ideas with fluency to both experts in mathematics and those with less experience. For many problems the process of the solution is as or more important than the solution itself, making communication a natural skill developed by the course.

Both summative and formative assessments may be used for student learning objectives 2, 3, 6, and 7. These assessments may include (but not restricted to) videos, reading assignments, homework, quizzes, unit tests, projects, and/or written/oral presentations.

EMPIRICAL AND QUANTITATIVE SKILLS (EQS), which involve numeracy or quantitative reasoning, include competency in working with numerical data and mathematical reasoning. Individuals with strong mathematical skills possess the ability to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations. They interpret data and results and can create conjectures and arguments supported by quantitative evidence and/or mathematical reasoning, which they can clearly communicate in a variety of formats (using words, tables, graphs, and/or equations as appropriate). This definition meets the THECB's direction that empirical and quantitative skills include applications of scientific and mathematical concepts; and is aligned with UTRGV's SLO for empirical and quantitative skills.

The course strongly centers on the empirical and quantitative skills objective, which permeates almost every topic included in the course and course objectives. These will be assessed through specific questions on the tests used in the course.