Department of Mathematics
Southeast Campus
Math 1314: College Algebra
CRN: 14305, SPRING 2017
AM 310|8:00 AM-9:30 AM|MW
3 hour lecture course / 48 hours per semester/16 Weeks
Textbook: College Algebra 2nd ed, by Julie Miller and Donna Gerken
McGraw Hill, 2016
ISBN-13:978-0077836344
ConnectMath Course Code: G44RC-FNVYC

Instructor: Eddy A. Attar, BBA, BS, MAT

Instructor Contact Information: eddy.attar@hccs.edu   713-718-7274

Office location and hours: Angela Morales Building, Faculty Offices 101.15G: Mon/Wed 9:30 AM – 11:00 AM. Tues/Thurs 10:00 AM – 11:00 AM. Please schedule appointment with instructor

Course Description
In-depth study and applications of quadratic, polynomial, rational, radical, exponential and logarithmic functions, and systems of equations using matrices and matrices and determinants
A departmental final examination will be given in this course.

Prerequisites
Math 0312 or its equivalent or an acceptable placement test score.

Course Goal
This course is designed as a review of advanced topics in algebra for science and engineering students who plan to take the calculus sequence in preparation for their various degree programs. It is also intended for non-technical students who need college mathematics credits to fulfill requirements for graduation and prerequisites for other courses. It is generally transferable as math credit for non-science majors to other disciplines.

Course Student Learning Outcomes (SLO):
Upon successful completion of this course, students will:

1. Demonstrate and apply knowledge of properties of functions, including domain and range, Operations, compositions, and inverses.

2. Recognize and apply polynomial, rational, radical, exponential and logarithmic functions and solve related equations.

3. Apply graphing techniques.

4. Evaluate all roots of higher degree polynomial and rational functions.

5. Recognize, solve and apply systems of linear equations using matrices.

Objectives
Students will:
1. Solve Quadratic Equations in one variable by the method of factoring, square root property, completing the square and the quadratic formula.
2. Solve radical equations, fractional equations, and equations of quadratic form.
3. Solve linear inequalities and linear equations involving absolute value, state the solution in interval notation, and graph the solution.
4. Solve non-linear (quadratic and rational) inequalities, state the solution in interval notation, and graph the solution.
5. Solve exponential and logarithmic equations.
6. Solve systems of linear and nonlinear in two variables.
7. Find the distance and midpoint between two points in the Cartesian Plane.

8. Recognize the equation of a straight line, graph the equation of a straight line, find the slope and intercepts of a line, know the relationship between the slopes of parallel and perpendicular lines, and be able to determine the equation of a line

9. Graph linear functions, quadratic functions, piecewise-defined functions, absolute value functions, polynomial functions, rational functions, exponential functions, and logarithmic functions.

10. Understand vertical and horizontal shifts, stretching, shrinking, and reflections of graphs of functions.

11. Recognize the equation of a circle, sketch the graph of a circle, and find the equation of a circle.

13. Determine the rational zeros of a polynomial.

14. Apply the definition of a function, determine the domain and range of a function, evaluate expressions involving functional notation, simplify expressions involving the algebra of functions, graph functions by plotting points, use the definition

15. Understand the inverse relationship between the exponential and logarithmic functions.

16. Perform operations with matrices.

17. Solve and apply systems of linear equations using matrices.

<u>Core Objectives:</u>

Critical Thinking Skills: to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.

Communication Skills: to include effective development, interpretation and expression of ideas through written, oral and visual communication.

Empirical and Quantitative Skills: to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

CALENDAR (Tentative and Subject to Change)

Mon. Jan. 16:	**MLK HOLIDAY SCHOOL CLOSED**
Wed. Jan. 18:	**No Class Weather Delay**
Mon. Jan. 23:	Syllabus
	Section 1.1 Linear Equations and Rational Equations
Wed. Jan. 25:	Section 1.4 Quadratic Equations
	Section 1.5 Applications of Quadratic Equations
Mon. Jan. 30:	Section 1.6 More Equations and Applications
	Section 1.7 Linear, Compound, and Absolute Value Inequalities
Wed. Feb. 1:	**QUIZ 1** (Ch. 1) Chapter 1 HW Due Tuesday Jan. 31st before Midnight
Mon. Feb. 6:	Section 2.1 The Rectangular Coordinate System and Graphing
	Section 2.2 Circles
Wed. Feb. 8:	Section 2.3 Functions and Relations
	Section 2.4 Linear Equations in Two Variables and Linear Functions
Mon. Feb. 13:	Section 2.5 Applications of Linear Equations
	Section 2.6 Transformations of Graphs
Wed. Feb. 15:	Section 2.7 Analyzing Graphs of Functions and Piecewise Defined Functions
	Section 2.8 Algebra of Functions and Function Composition
Mon. Feb. 20:	**PRESIDENTS DAY HOLIDAY, SCHOOL CLOSED**
Wed. Feb. 22:	**QUIZ 2** (Ch. 2) Chapter 2 HW Due Tuesday Feb. 21st before Midnight
Mon. Feb. 27:	**TEST 1** (Ch. 1,2) Use Quiz 1 and Quiz 2 for Review
Wed. Mar. 1:	Section 3.1 Quadratic Functions
	Section 3.2 Introduction to Polynomial Functions
Mon. Mar. 6:	Section 3.3 Division of Polynomials
Wed. Mar. 8:	Section 3.4 Zeros of Polynomials
	Section 3.5 Rational Functions

MONDAY MARCH 13 – SUNDAY MARCH 19, SPRING BREAK SCHOOL CLOSED

Mon. Mar. 20:	Section 3.6 Polynomial and Rational Inequalities

Wed. Mar. 22:   **QUIZ 3** (Chapter 3) Chapter 3 HW Due Tuesday Mar. 21ˢᵗ before Midnight
Mon. Mar. 27:   Section 4.1 Inverse Functions
                 Section 4.2 Exponential Functions
Wed. Mar. 29:   Section 4.3 Logarithmic Functions
                 Section 4.4 Properties of Logarithms
Mon. Apr. 3:   Section 4.5 Exponential and Logarithmic Equations
Wed. Apr. 5:   **QUIZ 4** (Ch. 4) Chapter 4 HW Due Tuesday Apr. 4ᵗʰ before Midnight
Mon. Apr. 10:   **TEST 2** (Ch. 3,4) Use Quiz 3 & Quiz 4 for Review
Wed. Apr. 12:   Section 5.1 Systems of Linear Equations in Two Variables
                 Section 5.4 Systems of Nonlinear Equations in Two Variables
Mon. Apr. 17:   Section 6.1 Solving Systems of Linear Equations Using Matrices
Wed. Apr. 19:   Section 6.3 Operations on Matrices
                 Section 6.5 Determinants
Mon. Apr. 24:   **QUIZ 5** (Chapters 5 & 6) Chapters 5 & 6 HW Due Sunday Apr. 23ʳᵈ before Midnight
Wed. Apr. 26:   **TEST 3** (Ch. 3,4,5,6)) Use Test 2 and Quiz 5 for Review
Mon. May 1:   REVIEW FINAL
Wed. May 3:   REVIEW FINAL
Mon. May 8:   NO CLASS FINAL EXAM WEEK
Wed. May 10:   **FINAL EXAM - Mandatory** (8:00 AM – 10:00 AM) **NO MAKEUPS**

Instructional Methods
This course will be a combination of lecture and in class tutoring.

Student Assignments
Three tests will be given during the course totaling 35% of your grade. Performance on five quizzes will determine another 15%. A comprehensive final exam will be given counting 40% of your grade. The remaining 10% will come from homework.
NOTE: There will be no make-up tests under any circumstances. Missing only one test will not penalize any student. In the event that a student should miss one test, the final exam will be substituted in its place. Quizzes are in class assignments and cannot be made up. *It is the responsibility of the student to get with the instructor concerning any missed assignments*

Assessments
Tests   35%
Quizzes   15%
Homework   10%
Final Exam   40%
  TOTAL =   100%

HCC Policy Statement – ADA Services to Students with Disabilities

Houston Community College is dedicated to providing an inclusive learning environment by removing barriers and opening access for qualified students with documented disabilities in compliance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act. Ability Services is the designated office responsible for approving and coordinating reasonable accommodations and services in order to assist students with disabilities in reaching their full academic potential. In order to receive reasonable accommodations or evacuation assistance in an emergency, the student must be registered with Ability Services.

 If you have a documented disability (e.g. learning, hearing, vision, physical, mental health, or a chronic health condition), that may require accommodations, please contact the appropriate Ability Services Office below. Please note that classroom accommodations cannot be provided prior to your Instructor's receipt of an accommodation letter and accommodations are not retroactive. Accommodations can be requested at any time during the semester, however, if an accommodation letter is provided to the Instructor after the first day of class, sufficient time (1 week) must be allotted for the Instructor to implement the accommodations.

Ability Services Contact Information:

Central College	713-718-6164	
Coleman College	713-718-7376	
Northeast College	713-718-8322	
Northwest College	713-718-5422	713-718-5408
Southeast College	713-718-7144	
Southwest College	713-718-5910	
Adaptive Equipment/Assistive Technology	713-718-6629	713-718-5604
Interpreting and CART services	713-718-6333	

HCC Policy Statement: Title IX

HCC is committed to provide a learning and working environment that is free from discrimination on the basis of sex which includes all forms of sexual misconduct. Title IX of the Education Amendments of 1972 requires that when a complaint is filed, a prompt and thorough investigation is initiated. Complaints may be filed with the HCC Title IX Coordinator available at 713 718-8271 or email at oie@hccs.edu.
Title IX of the Education Amendments of 1972 requires that institutions have policies and procedures that protect students' rights with regard to sex/gender discrimination.
Information regarding these rights are on the HCC website under Students-Anti-discrimination. Students who are pregnant and require accommodations should contact any of the ADA Counselors for assistance.
It is important that every student understands and conforms to respectful behavior while at HCC.
Sexual misconduct is not condoned and will be addressed promptly. Know your rights and how to avoid these difficult situations.
Log in to www.edurisksolutions.org. Sign in using your HCC student email account, then go to the button at the top right that says Login and enter your student number.

HCC Policy Statement: Academic Honesty
The use of a calculator during an exam is prohibited and will be considered cheating.
A student who is academically dishonest is, by definition, not showing that the coursework has been learned, and that student is claiming an advantage not available to other students. The instructor is responsible for measuring each student's individual achievements and also for ensuring that all students compete on a level playing field. Thus, in our system, the instructor has teaching, grading, and enforcement roles. You are expected to be familiar with the University's Policy on Academic Honesty, found in the catalog. What that means is: If you are charged with an offense, pleading ignorance of the rules will not help you. Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Penalties and/or disciplinary proceedings may be initiated by College System officials against a student accused of scholastic dishonesty. "Scholastic dishonesty": includes, but is not limited to, cheating on a test, plagiarism, and collusion.

Cheating on a test includes:
- Copying from another students' test paper;
- Using materials not authorized by the person giving the test;
- Collaborating with another student during a test without authorization;
- Knowingly using, buying, selling, stealing, transporting, or soliciting in whole or part the contents of a test not yet administered;

- Bribing another person to obtain a test that is to be administered.

<u>Plagiarism</u> means the appropriation of another's work and the unacknowledged incorporation of that work in one's own written work offered for credit.

<u>Collusion</u> mean the unauthorized collaboration with another person in preparing written work offered for credit. Possible punishments for academic dishonesty may include a grade of 0 or F in the particular assignment, failure in the course, and/or recommendation for probation or dismissal from the College System. (See the Student Handbook)

HCC Policy Statements

Class Attendance - It is important that you come to class! Attending class regularly is the best way to succeed in this class. Research has shown that the single most important factor in student success is attendance. Simply put, going to class greatly increases your ability to succeed. You are expected to be on time at the beginning of each class period. For complete information regarding Houston Community College's policies on attendance, please refer to the Student Handbook. You are responsible for materials covered during your absences. Class attendance is checked daily. Although it is your responsibility to drop a course for nonattendance, the instructor has the authority to drop you for excessive absences.

If you are not attending class, you are not learning the information. As the information that is discussed in class is important for your career, **students may be dropped from a course after accumulating absences in excess of six (6) hours of instruction**. The six hours of class time would include any total classes missed or for excessive tardiness or leaving class early.

You may decide NOT to come to class for whatever reason. As an adult making the decision not to attend, you do not have to notify the instructor prior to missing a class. However, if this happens too many times, you may suddenly find that you have "lost" the class.

Poor attendance records tend to correlate with poor grades. If you miss any class, including the first week, <u>you are responsible for all material missed.</u> It is a good idea to find a friend or a buddy in class who would be willing to share class notes or discussion or be able to hand in your work if you unavoidably miss a class

HCC Course Withdrawal Policy

If you feel that you cannot complete this course, you will need to withdraw from the course prior to the final date of withdrawal. Before, you withdraw from your course; please take the time to meet with the instructor to discuss why you feel it is necessary to do so. The instructor may be able to provide you with suggestions that would enable you to complete the course. Your success is very important. Beginning in fall 2007, the Texas Legislature passed a law limiting first time entering freshmen to no more than **SIX** total course withdrawals **throughout** their educational career in obtaining a certificate and/or degree.

To help students avoid having to drop/withdraw from any class, HCC has instituted an Early Alert process by which your professor *may* "alert" you and HCC counselors that you might fail a class because of excessive absences and/or poor academic performance. It is your responsibility to visit with your professor or a counselor to learn about what, if any, HCC interventions might be available to assist you – online tutoring, child care, financial aid, job placement, etc. – to stay in class and improve your academic performance.

If you plan on withdrawing from your class, you **MUST** contact a HCC counselor or your professor prior to withdrawing (dropping) the class for approval and this must be done **PRIOR** to the withdrawal deadline to receive a "W" on your transcript. **Final withdrawal deadlines vary each semester and/or depending on class length, please visit the online registration calendars, HCC schedule of classes and catalog, any HCC Registration Office, or any HCC counselor to determine class withdrawal deadlines. *Remember to allow a 24-hour response time when communicating via email and/or telephone with a professor and/or counselor. Do***

not submit a request to discuss withdrawal options less than a day before the deadline. If you do not withdraw before the deadline, you will receive the grade that you are making in the class as your final grade. **The Last Day to Withdraw is Monday April 3, 2017.**

Repeat Course Fee

The State of Texas encourages students to complete college without having to repeat failed classes. To increase student success, students who repeat the same course more than twice, are required to pay extra tuition. The purpose of this extra tuition fee is to encourage students to pass their courses and to graduate. Effective fall 2006, HCC will charge a higher tuition rate to students registering the third or subsequent time for a course. If you are considering course withdrawal because you are not earning passing grades, confer with your instructor/counselor as early as possible about your study habits, reading and writing homework, test taking skills, attendance, course participation, and opportunities for tutoring or other assistance that might be available.

Classroom Behavior

Appropriate behavior in class is expected. Please be kind and considerate of fellow classmates and instructor.

Use of Camera and/or Recording Devices

As a student active in the learning community of this course, it is your responsibility to be respectful of the learning atmosphere in your classroom. To show respect of your fellow students and instructor, you will turn off your phone and other electronic devices, and will not use these devices in the classroom unless you receive permission from the instructor.

Use of recording devices, including camera phones and tape recorders, is prohibited in classrooms, laboratories, faculty offices, and other locations where instruction, tutoring, or testing occurs. Students with disabilities who need to use a recording device as a reasonable accommodation should contact the Office for Students with Disabilities for information regarding reasonable accommodations

Instructor Requirements

The ConnectMath Access Code (Which includes an electronic version of the Textbook), Plenty of Pencils, and a spiral notebook or binder with loose leaf paper is recommended for all notes and homework assignments

Grading Scale

90 - 100 = A
80 - 89 = B
70 - 79 = C
60 - 69 = D
00 - 59 = F
Note: The instructor cannot assign a grade of W.

Personal Communication Device Policy:

All personal communication devices (any device with communication capabilities including but not limited to cell phones, blackberries, pagers, cameras, palmtop computers, lap tops, PDA's, radios, headsets, portable fax machines, recorders, organizers, databanks, and electronic dictionaries or translators) must be muted or turned off during class. Such activity during class time is deemed to be disruptive to the academic process. Personal communication devices are to not be on the student desk during examinations. Usage of such devices during exams is expressly prohibited during examinations and will be considered cheating (see academic honesty section above).

Student Course Reinstatement Policy:

Students have a responsibility to arrange payment for their classes when they register, either through cash, credit card, financial aid, or the installment plan. Faculty members have a responsibility to check their class

rolls regularly, especially during the early weeks of a term, and reconcile the official class roll to ensure that no one is attending class whose name does not appear on it. Students who are dropped from their courses for nonpayment of tuition and fees who request reinstatement after the official date of record (OE Date) can be reinstated by making payment in full and paying an additional \$75 per course reinstatement fee. A student requesting reinstatement should present the registrar with a completed **Enrollment Authorization Form** with the signature of the instructor, department chair, or dean who should verify that the student has been attending class regularly. Students who are reinstated are responsible for all course policies and procedures, including attendance requirements.

Resources:

Free tutoring is available in **the Angela Morales Building Room 210.** Additional help is also available through Student Support Services. Students can get free assistance, 24 hours a day, 7 days a week, in Math, English and other subjects, at www.hccs.askonline.net. Typically, posted questions are answered by an HCC tutor or faculty within 24 hours (usually under 6 hours). There are also several online math resources that you can find with an internet search. You may also find information on the Learning Web site accessible through your specific HCCS campus website.

EGLS$_3$ -- Evaluation for Greater Learning Student Survey System
At Houston Community College, professors believe that thoughtful student feedback is necessary to improve teaching and learning. During a designated time, you will be asked to answer a short online survey of research-based questions related to instruction. The anonymous results of the survey will be made available to your professors and division chairs for continual improvement of instruction. Look for the survey as part of the Houston Community College Student System online near the end of the term. Visit www.hccs.edu/EGLS3 for more information.

Administration contact information

College - Level Math Courses

Chair of Math	Jaime Hernandez	SW Campus	713-718-2477	Stafford, Scarcella, N108
- Secretary	Tiffany Pham	SW Campus	713-718-7770	Stafford, Scarcella, N108
Math Assoc. Chair	Clen Vance	CE Campus	713-718-6448	San Jacinto Building, Rm 369
Math Assoc. Chair	Ernest Lowery	NW Campus	713-718-5512	Katy Campus Building, Rm 112
Math Assoc. Chair	Mahmoud Basharat	NE Campus	713-718-2438	Codwell Hall Rm 105

Developmental Math Courses

Chair of Dev. Math	Susan Fife	SE Campus	713-718-7241	Felix Morales Building, Rm 124
- Secretary	Carmen Vasquez	SE Campus	713-718-7056	Felix Morales Building, Rm 124
Dev. Math Assoc. Chair	Marisol Montemayor	SE Campus	713-718-7153	Felix Morales Building, Rm 124
Dev. Math Assoc. Chair	Jack Hatton	NE Campus	713-718-2434	Northline Building, Room 321
Technical Support Special	Hien Nguyen	NE Campus	713-718-2440	Northline Building, Rm 321

For issues related to your class, please first contact your instructor.
If you need to contact departmental administration, then contact the appropriate Associate Chair.
If further administrative contact is necessary, then contact the appropriate Department Chair.

Connect Math Financial Aid Access Code Request

This email contains the Financial Aid Access Code requested for Math 1314 College Algebra 8:00 AM - 9:30 AM MW - 14305.

Instructors: Please forward or print this email to share with the student(s) requesting assistance. For more information on the steps a student should follow to use the FAAC and extend their Connect Math accounts uninterrupted, please reference the attached documentation.

Instructions for the student:

Your **Course Code** is: **G44RC-FNVYC**
Your **Financial Aid Access Code** is: **A2E05-C500D-87A4B-52957**

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

NOTE: This code gives you temporary access to Connect Math for a two-week period. Once the code expires, you will be locked out of your Connect Math 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 Connect Math account.

1. To sign up to Connect Math using the Financial Aid Access Code, go to: https://www-awd.connectmath.com
2. Click on the "**Sign up now!**" link located under "NEW USER?"
3. Enter your "**Course Code**" and press "**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 Connect Math and can immediately begin working in the course.
7. You can extend your Connect Math 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 Connect Math 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 Connect Math account to continue your course.**

Enjoy your course.

If you require technical assistance, please contact Connect Math Support at https://www.connectmath.com/support/form

Thank you,

The Connect Math Team

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