MATH 1314: College Algebra

CRN 74289 – Fall 2015 (Regular Term)
Online Instruction | In-Person Final Exam
3 hour lecture course / 48 hours per semester/ 16 weeks
Textbook: *College Algebra*, 1st Edition by Julie Miller
ISBN-13: 978-0078035630
Connect Math Course Code: PLJEQ-PWWDJ

First Day of Class: Monday, August 24, 2015

Instructor: Kimber Kaushik

Contact Information: kimber.kaushik@hccs.edu, 713/718-5733

Office Location: Rm. 359 H at Northwest College's Katy Campus

Office Hours: Monday 10:30 – 11am, 12:30 – 1 pm and 2 – 4 pm; Tuesday 12 – 12:30 pm and 4 – 5 pm; Wednesday 10:30 – 11am

DE Student Services: The Distance Education Student Handbook contains policies and procedures unique to the DE student. Students should have reviewed the handbook as part of the mandatory orientation. It is the student's responsibility to be familiar with the handbook's contents. The handbook contains valuable information, answers, and resources, such as DE contacts, policies and procedures (how to drop, attendance requirements, etc.), student services (ADA, financial aid, degree planning, etc.), course information, testing procedures, technical support, and academic calendars.

Services to Students with Disabilities: Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the Ability Services Office at his or her respective college at the beginning of each semester. Faculty members are authorized to provide only the accommodations requested by the Ability Support Services Office. Persons needing accommodations due to a documented disability should contact the ADA counselor for their college as soon as possible. For questions, please contact Donna Price at 713.718.5165. To visit the ADA Web site, please visit www.hccs.edu then click Future students, scroll down the page and click on the words Ability Information.

Northwest College Ability Support Service Office

Katy Campus
1550 Fox Lake Drive, Rm. 111
Houston, TX 77084
Phone: 713/718-5408
Fax: 713/718-7990

Spring Branch Office
1010 W. Sam Houston Pkwy North
Phone: 713/718-5422
Fax: 713/718-5430

Course Description: Topics include quadratics, polynomial, rational, logarithmic and exponential functions, system of equations, 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):

- Solve algebraic equations and inequalities involving linear and nonlinear expressions.
- Examine and interpret the graphs of circles, polynomial functions, rational functions, basic functions, and their transformations.
- Apply the basic knowledge of a function in order to simplify functions, combine functions, and solve application problems involving linear and nonlinear functions.
- Perform basic matrix operations.

Learning Objectives: Students will

1.1   Solve Quadratic Equations in one variable by the method of factoring, square root property, completing the square and the quadratic formula.
1.2   Solve radical equations, fractional equations, and equations of quadratic form.
1.3   Solve linear inequalities and linear equations involving absolute value, state the solution in interval notation, and graph the solution.
1.4   Solve non-linear (quadratic and rational) inequalities, state the solution in interval notation, and graph the solution.
1.5   Solve exponential and logarithmic equations.
1.6   Solve systems of linear and nonlinear in two variables.
2.1   Find the distance and midpoint between two points in the Cartesian Plane.
2.2   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.
2.3   Graph linear functions, quadratic functions, piecewise-defined functions, absolute value functions, polynomial functions, rational functions, exponential functions, and logarithmic functions.
2.4   Understand vertical and horizontal shifts, stretching, shrinking, and reflections of graphs of functions.
2.5   Recognize the equation of a circle, sketch the graph of a circle, and find the equation of a circle.
2.6   Determine the rational zeros of a polynomial.
3.1   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.
3.2   Understand the inverse relationship between the exponential and logarithmic functions.
4.1   Perform operations with matrices.

Core Objectives

- **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.

Connect Math: All assignments EXCEPT THE FINAL EXAM are accessed via the online program Connect Math (available at www.connectmath.com). On the first day of class, you'll find details about registering for Connect Math in the "Connect Math" topic on the Eagle Online homepage for this course.

Textbook: An electronic version of the textbook, *College Algebra* (1st Edition, by Julie Miller) comes with your Connect Math subscription.

If you want a hard copy of the textbook, you can purchase it at any HCC campus bookstore or online through many book ordering websites. If you buy the book on campus, it will come packaged with an access code for Connect Math. Please note that if you purchase the textbook elsewhere, it may not come packaged with Connect Math; in this case, you will have to pay separately for a Connect Math subscription.

Calculator Use: Please avoid using a calculator for straight-forward calculations. You will not be able to use a calculator during the final exam.

Math Forum Participation: You will be expected to contribute one original post to each of the three math forums in Eagle Online. Posts will be graded for accuracy, but you'll have the opportunity to improve your grade on each post by addressing the instructor's comments. These forums create a classroom community by giving you the opportunity to help one another. Your participation in the forums also strengthens your ability to communicate in math, and helps you understand topics more deeply.

Each math forum post is worth up to five points. You can check your forum post grades by clicking the "Grades" link in Eagle Online. At the end of the semester, you'll also see your Math Forum Participation grade in Connect Math's Gradebook.

SmartBook: Connect Math's SmartBook is an adaptive eText which helps you study in a deeper, more efficient manner. When you are ready to start a new chapter, launch the SmartBook, and preview and outline the chapter as prompted. Next, read one section and practice before beginning the homework assignments associated with the section. Finally, when you finish a chapter, use the recharge feature of the SmartBook to review the content.

Section Video Tutorials: Before you begin the homework assignment for a textbook section, view the video tutorials for that section. Viewing section video tutorials provides an overview of the section's material and gives you a context for the section's homework problems.

While you view section video tutorials, be sure to work the examples along with the lecturer. You can pause or rewind the video at any time. Note that you may not use a calculator during this course, so please ignore any references to calculator use in the videos. Video tutorials are due one week after they are posted.

Section Homework: There are homework assignments for each textbook section covered in class, each accessed in Connect Math and due one week after they are posted.

Unit Test Reviews: To prepare for each unit test, complete the associated unit test review in Connect Math. Unit test reviews are graded as homework assignments, and you must score at least 80% on the unit test review to access the corresponding unit test. Unit test reviews are available one week before their associated unit test and are due the same day as the unit test.

Unit Tests: There are four unit tests, each accessed in Connect Math. Before you take a unit test, complete the section video tutorial and homework assignments for the chapters covered on the test, as well as the corresponding unit test review. I'll drop your lowest unit test grade.

Final Exam Review: The final exam review, worth up to five bonus points on the final exam, will be available in Connect Math three weeks before the final exam. Make sure you can do the problems without a calculator.

Mastering the Material: I suggest that you record your work in a math notebook. Be neat and highlight tricky problems. Writing your work in an organized manner helps you think clearly and gives you a record of your thought. You can then review the material as you study for the Final Exam. To receive partial credit on the Final Exam, you must show your work neatly; therefore, keeping a math notebook gives you good practice.

As the course progresses, I also suggest that you make study cards with important formulas, definitions and problem-solving techniques. You might find it helpful to refer to the Key Concepts at the end of each chapter when making your cards. Eventually, you'll need to memorize the information on all your study cards since you won't be able to use any cards or notes of any kind during the Final Exam.

Finally, free in-person tutoring is available at many HCC campuses. Another option is to use HCC's free Online Tutoring Services, available at www.hccs.askonline.net. Use your student ID or HCC e-mail address to create an account. Instructions, including a 5-minute video, are provided to make you familiar with the capabilities of this service. Of course, you are also welcome to visit or call me during my office hours!

Final Exam Preparation: First, reread the Key Concepts at the end of each chapter covered in class, and study the cards you've made for each chapter.

Next, work through the Final Exam Review available in Connect Math. I encourage you to discuss the Final Exam Review problems in the "Let's Help One Another" forum in Eagle Online or work on the review with classmates in one of the HCC tutoring labs or libraries.

Finally, be sure to get a good night's sleep the night before the final exam. Review your study cards the night before and the morning of the final exam, and eat a meal with protein before exam time.

Final Exam: The final exam is a paper and pencil test, has 33 multiple-choice questions, lasts two hours, and covers all material from class. The exam is CLOSED BOOK, AND NO NOTES OR CALCULATORS ARE ALLOWED.

The final exam must be taken in person at a designated testing location in Houston at the end of the fall semester, on December 4, 5 or 6. If you live outside the Houston area, you need to inform me and arrange for proctored testing near you. Refer to the "Final Exam" topic on the Eagle Online home page for testing times and locations, and for more information about out-of-area testing.

You can earn up to five bonus points on the final exam by completing the final exam review in Connect Math, or by turning in the study cards you made for the final exam.

MATERIALS NEEDED FOR TAKING THE FINAL EXAM:

- Sharpened #2 pencils
- Eraser (Hi-Polymer erasers by Pentel are recommended)
- Picture ID
- Course information: MATH 1314, CRN 74289, Professor Kimber Kaushik
- Optional: study cards (turn in to me before you start the final exam)

When you arrive at a testing location, you must show your ID and provide the course information listed above. You'll be given a test booklet and a scantron form. I'm proctoring each day, so please ask to be seated in my room.

Do not write on the final exam. Instead, number and show your work neatly on the provided scratch paper, then mark your answers carefully on your scantron form.

Evaluation: You can find your course average and individual assignment grades in the Connect Math Gradebook. Your course average will be calculated as follows:

- 10%: Math Forum Participation
- 15%: Homework average (video tutorials and section homework)
- 45%: Unit Test average
- 30%: Final Exam

Your course grade is based on your course average as follows:

A: 90 – 100%, B: 80 – 89%, C: 70 – 79%, D: 60 – 69%, F: less than 60%

Academic Honesty: 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. I am 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, I have 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.

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

Collusion 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)

Dropping/Withdrawing from the Course: If you wish to drop the course without a grade, you must do so by Tuesday, September 8, 2015. If you do not log in to this course's Eagle Online shell or register for MyMathLab by September 8, you will be automatically dropped from the course.

If you feel that you cannot complete this course, you will need to withdraw from the course by Friday, October 30, 2015, at 4:30 pm. Before you withdraw from the course, please contact me to discuss why you feel it is necessary to do so. I 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 I *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 me 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.

Note that I may administratively withdraw you if you are inactive in the course between September 8 and October 30, but I will first attempt to contact you.

Please read the section "Policies and Procedures" in the DE Student Handbook for more details about the withdrawal process.
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 me or your 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.

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.

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 near the end of the semester, 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 department chairs for continual improvement of instruction. To evaluate your instructor, go to http://www.hccs.edu/district/students/egls3/.

Administration Contact Information:

College - Level Math Courses

Chair of Math	Jaime Hernandez	SW Campus	713-718-7772	Stafford, Scarcella, N108
- Secretary		SW Campus	713-718-7770	Stafford, Scarcella, N108
Math Assoc. Chair	Roderick McBane	CE Campus	713-718-6644	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

For issues related to your class, please first contact me. 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.