Math 1314 – College Algebra Course Syllabus

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Office hours: TBA
Office Phone: 713-718-2438, (Please leave a message); Cell: 713-385-7177.
➢ I will return your email, text, or call within 48 hours.

DE link and Student’s User ID Be sure to use the link https://eo2.hccs.edu/login/index.php to log in to Eagle Online. Your Eagle Online ID is now the same as your HCC User ID which is used for Online Registration. [For example: W0034567] If you do not know your User ID you can look it up using the following links: https://hccsaweb.hccs.edu:8080/psp/EMPLOYEE/HRMS/c/HCCS_CUST_MENU.HC C_UAT.GBL
Your default Eagle Online password at the beginning of the term is: "distance". This password is independent of your Online Registration password. You will be required to change your password when you first log in.

Browser troubles? Use the latest version of Firefox.
Please visit the DE website http://de.hccs.edu/student-services/ for students services.

Catalog Description: Topics include quadratics, polynomial, rational, logarithmic, and exponential functions; systems of equations; matrices; and determinants. A departmental final examination will be given in this course.
Prerequisites: Math 0312 or Math 0112: Pass with “C” or better or acceptable placement test score.
Credits: 3 credit hours (3 lecture).

Course Intent & Audience: 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 to other disciplines as math credit for non-science majors.

Course Objectives: At the completion of this course, a student should be able to:

1. Solve Quadratic Equations in one variable by the method of factoring, square root property, completing the square and the quadratic formula.
2. Find the distance and midpoint between two points in the Cartesian plane.
3. Solve radical equations, fractional equations, and equations of quadratic form.
4. 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 from information such as
two points on the line, or one point on the line and the slope of the line.
5. Know 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, know the definition of inverse functions, and
given a function find its inverse.
6. Graph linear functions, quadratic functions, piecewise-defined functions, absolute value
functions, polynomial functions, rational functions, exponential functions, and logarithmic
functions.
7. Solve linear inequalities and linear equations involving absolute value, state the solution in
interval notation, and graph the solution.
8. Solve non-linear (quadratic and rational) inequalities, state the solution in interval notation,
and graph the solution.
9. Understand vertical and horizontal shifts, stretching, shrinking, and reflections of graphs of
functions.
10. Recognize the equation of a circle, sketch the graph of a circle, and find the equation of a
circle.
11. Determine the rational zeros of a polynomial.
12. Understand the inverse relationship between the exponential and logarithmic functions.
13. Solve exponential and logarithmic equations.
15. Perform operations with matrices.
16. Recognize the conic sections.

Materials Needed:

1. WebAssign: You must purchase an access code for WebAssign. With WebAssign, you will
have the option to purchase the electronic version of the textbook. WebAssign is an online homework/quiz system. You may purchase WebAssign access code online. I will provide you with the course Key for WebAssign on the first
day of class. The WebAssign site: http://www.webassign.net/

   Browser troubles? Use the latest version of Firefox.

   Learning, 2011.

3. Student’s Solution Manual (Optional): The textbook has an optional student
   supplement that contains worked out odd numbered problems in the text. You may find
   this useful since most of the suggested homework problems that you will be doing are
   odd numbered

HCC Course Withdrawal Policy
Texas imposes penalties on students who drop courses excessively. Students are limited to no more
than SIX total course withdrawals throughout their educational career at a Texas public college or
university. To help students avoid having to drop/withdraw from any class, HCC has instituted an
Early Alert process by which your professor will “alert” you and distance education (DE) counselors
that you might fail a class because of excessive absences and/or poor academic performance. Contact your DE professor or a DE 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. **It is the student responsibility to withdraw from the class before the withdrawal deadline** If you do not withdraw before the deadline, you will receive the grade that you have earned by the end of the semester. Zeros averaged in for required assignments/tests not submitted will lower your semester average significantly, most likely resulting in a failing grade (“F”). **Please check the course calendar posted on Eagle Online for The final withdrawal deadline date.**

**Note:**

1. **Students who repeat a course for a third or more times may soon face significant tuition/fee increases at HCC and other Texas public colleges and universities.** Please ask your instructor / counselor about opportunities for tutoring / other assistance prior to considering course withdrawal or if you are not receiving passing grades.

2. **INTERNATIONAL STUDENTS:** Receiving a W in a course may affect the status of your student Visa. Once a W is given for the course, it will not be changed to an F because of the visa consideration. Please contact the International Student Office at 713-718-8520 if you have any questions about your visa status and other transfer issues.

**PLEASE REMEMBER THAT AS A MEMBER OF THE HCCS ACADEMIC COMMUNITY YOU ARE BOUNDED TO OBSERVE THE ACADEMIC HONESTY CODE (SEE THE HCCS STUDENT HANDBOOK) IN ALL YOUR SCHOOL WORK.**

**Grading & Evaluation:** Your grade will be determined based upon how many points that you accumulate from quizzes, web activity, homework, and exams. The approximate number of points is as follows:

1. Four major examinations each is a 100 points.
2. A departmental comprehensive final (100 points). **The final exam will be onsite at one of the designated testing centers.** If you are out of town then you will have to provide me with the information of the nearest college testing center near you. I will update you with the available testing centers when the time comes. If you can’t make it to the designated testing center please consider an alternative section that meets your needs.
3. Homework assignments via WebAssign a 100 points. I will provide you with the course **Key for WebAssign on the first day of class.** Remember that you will have 10 days free trial to access WebAssign.

**Final average** = \( \frac{\text{Exam 1 } + \text{ Exam 2 } + \text{ Exam 3 } + \text{ Exam 4- (Lowest Exam) } + \text{ HW Assignments via WebAssign } + \text{ Final Exam} }{5} \)

**No make-up exams will be given.** If a student misses an exam then that will be his/her lowest exam. **If a student misses a second exam, then that is a zero**
The final course average will be used in the usual manner (90-100 “A”; 80-89 “B”; 70-79 “C”; 60-69 “D”; Below 60 “F”).

- It is important that your name on all your work for this class matches HCCS record. I will not change any grade if you use different last name or median name or merge name!!!!

**Final Examination:**
The final examination is departmental and consists of 33 multiple-choice problems. The problems cover all the material required in the course. **The final exam will be onsite at one of the designated testing centers.**

- The dates for all the exams and the daily assignments will be posted on the Course Calendar on Eagle-Online.

- **Where to get help**
  - Come see me during my office hours.
  - Go to the nearest hccs Mathlab for tutoring.
  - Watch a youtube Video; just type in the topic in the search engine!!

**Internet Course Policies:**
- It is important that we behave as an adult in this course!! I will not tolerate any rudeness or any an impropriate language; so please if there is an issue or a problem let me know and I’ll do my best to resolve the issue.

- You need, constantly on a daily basis, to check the calendar, course work, e-mail and other links on your web page to ensure a successful and timely completion

- Check the course [calendar](#) for events, and examination dates.

- The results of the exam will be comunicated to you within a week through WebCT. If you have any question over any test grade and you would like to review it, you **must arrange an appointmet with me to discuss your grade.**

- All students must acquire access code to the Course Material.i.e.User name and Password. If you have any problem with logging to the course website please contact one of the Distance Education Technicians: [desupport@hccs.edu](mailto:desupport@hccs.edu)

- It is **extremely important** that you take the exam during the scheduled time!!!!
Communication is the most problematic area in distance education. Remember that we don't see face to face, and so we are not able to read body languages and interact with each other as in a traditional class room.

It is important that you do your homework and practice in this course. It is absolutely essential that you do as much of the homework as possible, **if you don’t do the assigned homework, I can almost guarantee that you will not be successful in this course.** I will be glad to answer questions about the homework problems during chat sessions and on the Discussion Forums.

**Caution:** There is one word that best summarizes the major difficulty that most people have taking a course online: procrastination! You will have great excitement and good intentions in the beginning, but as the course progresses, there will be a tendency to put off it just one more day while you do other urgent tasks. Soon the ‘one more day’ becomes a week and you are hopelessly behind! I will do my best to help keep you on track, but of the discipline must come from you. It is imperative that you follow the calendar that I will lay out for you if you plan to succeed.

**Resource Materials:** Any student enrolled in Math 1314 at HCCS has access to the Academic Support Center where they may get additional help in understanding the theory or in improving their skills. The Center is staffed with mathematics faculty and student assistants, and offers tutorial help, videotapes and computer-assisted drills. Also available is a student’s Solutions manual, which may be obtained from the Bookstore.

**Math Lab Hours:** (North East College) Please call 713-718-8000 for North line mall campus, and 713-718-8400 for the Pinemont campus. Also, please check the hours of the mathlab to the nearest HCCS campus to you.

Please feel free to come to the North Line Mall Campus, and/or Pinemont Campus and take advantage of our professional tutoring in the Math Lab. Also please feel free to come to my office during my office hours. I will publish them as soon as they are finalized the first week of class. Also please feel free to call or email me for an appointment.

**Course Outline:** The lecture/examination schedule given below is suggested for usage; the instructor is free to modify the schedule to meet his/her own needs.

<table>
<thead>
<tr>
<th>APPROXIMATE TIME</th>
<th>TEXT REFERENCE</th>
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<tbody>
<tr>
<td><strong>Unit I - Equations and Inequalities</strong></td>
<td>Sections: P.6, 1.1, 1.4*, 1.5*, 1.6, 1.7, 1.8</td>
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This unit includes graphs of equations, quadratic equations and applications, complex numbers, other types of equations, linear inequalities in one variable, and other types of inequalities.
Notes: 1. Section P.6: The Cartesian Plane, Distance Formula, and Midpoint Formula.
2. Section 1.4: This section includes only quadratic equations with real solutions.
3. Section 1.5: Operations with complex numbers (Optional).
   This section introduces complex solutions (non-real) to quadratic equations.

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**Unit II - Functions and Their Graphs**

Sections: 2.1 → 2.7

This unit includes linear equations in two variables, functions, analyzing graphs of functions, a library of Parent functions, transformations of functions, combinations of functions, composite functions and inverse functions.

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**Unit III - Polynomial Functions**

Sections 3.1, 3.2, 3.3, 3.4

This chapter includes quadratic functions and models, polynomial functions of higher degree, synthetic division, and zeros of polynomial functions.

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**Unit IV – Rational Functions and Conics**

Sections 4.1, 4.2

This unit includes rational functions and asymptotes and graphs of rational functions.

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**Unit V - Exponential and Logarithmic Functions**

Sections: 5.1, 5.4, (5.5 Optional)

This unit includes exponential functions and their graphs, logarithmic functions and their graphs, properties of logarithm and exponential and logarithmic equations.

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**Unit VI – Systems and Matrices**

Sections: 6.1, 6.2, 7.2, 7.4

This unit includes linear and nonlinear systems of equations, two variable linear systems, operations with matrices and the determinant of a square matrix.

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**Student Services**

**INTERNATIONAL STUDENTS:** Receiving a W in a course may affect the status of your student Visa. Once a W is given for the course, it will not be changed to an F because of the visa consideration. International Students are restricted to ONLY ONE online/distance education course each semester. Please contact the International Student
Office at 713-718-8520 if you have any questions about your visa status and other course issues.

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 appropriate HCC Disability Support Service (DSS) Counselor at the beginning of each semester. Faculty is authorized to provide only the accommodations requested by the Disability Support Services Office."
Students who are requesting accommodations must first contact the appropriate (most convenient) DSS Counseling office for assistance:
Central: 713.718.6164
Northwest: 713.718.5422
Northeast: 713.718.8420
Southeast: 713.718.7218
Southwest: 713.718.7909
System: 713.718.5165

*Deaf and Hard of Hearing Services – Central
*Students living outside of the HCC District service areas - Central

After student accommodation letters have been approved by the DSS office and submitted to DE Counseling, students will receive a confirmation email along with instructions regarding completion of the requested accommodation(s).

DISTANCE EDUCATION ADVISING AND COUNSELING SERVICES:
Advising can be accomplished by telephone at 713/718-5275 - option # 4 or via email at decounseling@hccs.edu. Confidential sessions with the distance education counselors will help students understand admissions, registration, entrance testing requirements, degree planning, transfer issues, and career counseling. HCC counselors also maintain a local referral base in order to provide appropriate referrals to students with personal or family issues that may require long-term solutions.

NOTICE FOR STUDENTS WHO LIVE OUTSIDE OF HOUSTON: Students who live outside the Houston area and cannot take paper exams at one of our HCC testing locations MUST make arrangements for a proctor. Please see the DE Student Services webpage for information at the following URL:
http://distance.hccs.edu/de-counseling/student_out_houston.htm

VIRTUAL CLASSROOM CONDUCT: As with on-campus classes, all students in HCC DE courses are required to follow all HCC Policies & Procedures, the Student Code of Conduct, the Student Handbook, and relevant sections of the Texas Education Code when interacting and communicating in a virtual classroom with faculty and fellow students. Students who violate these policies and guidelines will be subject to disciplinary action that could include denial of access to course-related email, discussion groups, and chat rooms or being removed from the class.
USE OF CAMERAS OR RECORDING DEVICES:
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.