



SOUTHWEST COLLEGE

Department of Mathematics

COURSE SYLLABUS

MATH 0308: Fundamentals of Math II

INSTRUCTOR:	Tamseela Ulhaque
CONTACT INFORMATION:	tamseela.ulhaque@hccs.edu

Textbook:

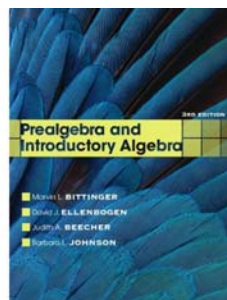
Prealgebra and Introductory Algebra
by Bittinger & Ellenbogen
Publisher: Addison Wesley
Pub. Date: December 2006
ISBN-13: 9780321331892



Or

Textbook:

Prealgebra and Introductory Algebra
by Bittinger & Ellenbogen; 3rd Ed.
Publisher: Addison Wesley, 2011
ISBN-13: 9780321731630



Course Description

1. Topics include real numbers, basic geometry, polynomials, factoring, linear equations, inequalities, and rational expressions.
2. A departmental final examination must be passed with a score of 60% or higher in order to pass the course.

Prerequisites

Must be placed into MATH 0308 (or higher) or completion of MATH 0306.

Student Learning Outcomes	Course Objectives
1. Identify and apply properties of real numbers, and perform accurate arithmetic operations with numbers in various formats and number systems.	1.1 Add, subtract, multiply and divide real numbers and manipulate certain expressions. 1.2 Solve problems using scientific notation. 1.3 Find square roots of perfect square numbers
2. Demonstrate the ability to manipulate/simplify algebraic expressions, and to classify and solve algebraic equations with appropriate techniques.	2.1 Solve problems using equations and inequalities. 2.2 Factor polynomials using the techniques of the greatest common factor, grouping, difference of two squares and special trinomials. 2.3 Multiply and divide, and simplify rational expressions.
3. Demonstrate the use of elementary graphing techniques.	3.1 Plot ordered pairs and graph linear equations.
4. Apply basic geometric theorems and formulas to rectangles, squares, parallelograms, triangles, trapezoids, circles, and angles.	4.1 Find the perimeter and area of rectangles, squares, parallelograms, triangles, trapezoids and circles; volume and surface area, relations between angle measures, congruent and similar triangles, and properties of parallelograms.

Course Goal

This course is intended for students who require state mandated remediation. Also, this course is intended for students who have never been exposed to algebra or who have been away from the subject for quite some time. In particular, this course is intended to prepare students for the study of Intermediate Algebra, a course that builds the foundation for the study of College Algebra.

Instructional Methods

As an instructor, I want my students to be successful. I feel that it is my responsibility to provide you with knowledge concerning mathematical concepts contained in our developmental math curriculum. This knowledge will prepare you for College Algebra and will allow you to meet the math requirements that are needed for your career of choice.

As a student wanting to master the mathematical concepts contained in the developmental math curriculum, it is your responsibility to read the textbook, submit assignments on the due dates, study for the exams, participate in classroom activities, attend class, and enjoy the learning experience.

In this course, you will be involved in discussions with your classmates and your instructor. As you will want to contribute to these discussions, you will need to come to class prepared to discuss, analyze and evaluate information from your text and notes.

Homework

All homework must be completed online using MYMATHLAB. The MyMathLab grade will be the equivalent of one test grade. To register for MyMathLab and to access the homework, go to www.coursecompass.com. You need to **buy the access code** in order to do the homework.

Final Examination

The final examination is departmental and consists of 33 multiple-choice problems. The problems cover all the material required in the course. If you score lower than 60% on the final exam, you automatically are given a course grade of “F”, as noted under the grading policy. If your score on the final exam is 60% or higher, then your grades are averaged using the formula specified under grading policy. You **MUST** pass the final exam in order to pass the course.

Make-up policy:

There will be no make-up exams.

Grading policy:

Your final course grade is based on the following standard HCC scale.

FINAL AVERAGE	FINAL GRADE	COURSE
$90 \leq \text{Average} \leq 100\%$		A
$80 \leq \text{Average} < 90\%$		B
$70 \leq \text{Average} < 80\%$		C
$60 \leq \text{Average} < 70\%$		D
$\text{Average} < 60\%$		F

A grade of “IP” (In Progress) will NOT be given. However, if your final grade is a “D”, then you may be eligible to take the bridge course MATH 0108 instead of repeating the class. To determine eligibility, please contact the math department.

A grade of “F” is given only if the final average is below 60.

For your course grade, the scores from your homework, three major tests, and the final examination will be taken into consideration as shown in the following formula.

$$\text{Final Average} = \frac{\text{Exam 1} + \text{Exam 2} + \text{Exam 3} + \text{My Math Lab Home Work} + \text{Final}}{5}$$

Withdrawal policy:

The State of 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 avoid having to drop/withdraw from a class, contact your DE professor regarding your academic performance. You may also want to contact your DE counselor to learn about helpful HCC resources (e.g. online tutoring, child care, financial aid, job placement, etc.).

In order to withdraw from your DE class and receive a “W” on your transcript, you MUST first contact your DE professor PRIOR to the withdrawal deadline. After the withdrawal

deadline has passed, you will receive a grade. Zeros averaged in for required coursework that is not submitted will lower your semester average significantly, most likely resulting in a failing grade of “F”. It is the responsibility of the student to withdraw from the class; however, your professor reserves the right to withdraw you without your request due to excessive absences. If you do not feel comfortable contacting your professor to withdraw, you may contact a DE counselor. However, please do **not** contact both a DE counselor and your DE professor to request a withdrawal; either one is sufficient.

HCC Policy Statement: 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. 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 College'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 that has not been 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)

Distance Education Counseling Services:

DE student information can be found on the DE Student Services website: de.hccs.edu. Advising or counseling can be accomplished through the online request form [AskDECounseling](#). Student Services Associates (SSA) and Counselors can assist students with admissions, registration, entrance testing requirements, degree planning, transfer issues, withdrawals, and career counseling. In-person, confidential sessions can also be scheduled to provide brief counseling and community referrals to address personal concerns impacting academic success.

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 Disability Support Services (DSS) Office at the beginning of the semester. Professors are authorized to provide only the accommodations requested by the Disability Support Services Office.

Students may contact the most convenient DSS office for assistance:

Disability Support Services Offices:

System: 713.718.5165

Central: 713.718.6164 – also for Deaf and Hard of Hearing Services and Students Outside of the HCC District service areas.

Northwest: 713.718.5422

Southeast: 713.718.7218

Northeast: 713.718.8420

Southwest: 713.718.7909

International Students:

International Students are restricted to ONLY ONE online/distance education class per semester. Please contact the International Student Office at 713-718-8520 if you have additional questions about your visa status.

Blackboard Student User ID:

Your Blackboard login user ID will be your HCC User ID (sometimes referred to as the “W” number). All HCC students have a unique User ID. If you do not know your User ID you can look it up by visiting the HCC home page:

- o From www.hccs.edu, under the column “CONNECT”, click on the “Student System Sign In” link.
- o Then click on “Retrieve User ID” and follow the instructions.

Or use the direct link to access the Student Sign In page:

<https://hccsaweb.hccs.edu:8080/psp/csprd/?cmd=login&languageCd=ENG>

The default student password is “distance.” Students will then be prompted to change their password after their first login. Please visit the DE Technical Support website if you need additional assistance with your login.

Course Schedule:

Chapters and Sections

Chapter 8 Geometry

- 8.1 Basic Geometric Figures
- 8.2 Perimeter
- 8.3 Area
- 8.4 Circles
- 8.5 Volume and Surface Area
- 8.6 Relationships Between Angle Measures
- 8.7 Congruent Triangles and Properties of Parallelograms
- 8.8 Similar Triangles

Chapter 9 Introduction to Real Numbers and Algebraic Expressions

- 9.1 Introduction to Algebra
- 9.2 The Real Numbers
- 9.3 Addition of Real Numbers

- 9.4 Subtraction of Real Numbers
- 9.5 Multiplication of Real Numbers
- 9.6 Division of Real Numbers
- 9.7 Properties of Real Numbers
- 9.8 Simplifying Expressions; Order of Operations

Chapter 10 Solving Equations and Inequalities

- 10.1 Solving Equations: The Addition Principle
- 10.2 Solving Equations: The Multiplication Principle
- 10.3 Using the Principles Together
- 10.4 Formulas
- 10.5 Applications of Percent
- 10.6 Applications and Problem Solving
- 10.7 Solving Inequalities
- 10.8 Applications and Problem Solving with Inequalities

Chapter 11 Graphs of Linear Equations

- 11.1 Graphs and Applications (Omit applications.)

Chapter 12 Polynomials: Operations

- 12.1 Integers as Exponents
- 12.2 Exponents and Scientific Notation
- 12.3 Introduction to Polynomials
- 12.4 Addition and Subtraction of Polynomials
- 12.5 Multiplication of Polynomials
- 12.6 Special Products
- 12.7 Operations with Polynomials in Several Variables
- 12.8 Division of Polynomials (monomial divisors only)

Chapter 13 Polynomials: Factoring

- 13.1 Introduction to Factoring
- 13.2 Factoring Trinomials of the Type $x^2 + bx + c$
- 13.3 Factoring $ax^2 + bx + c$, $a \neq 1$: The Foil Method
- 13.4 Factoring $ax^2 + bx + c$, $a \neq 1$: The ac – Method

13.5 Factoring Trinomial Squares and Differences of Squares

13.6 Factoring: A General Strategy

Chapter 14 Rational Expressions and Equations

14.1 Multiplication and Simplifying Rational Expressions

14.2 Division and Reciprocals