



# HOUSTON COMMUNITY COLLEGE SYSTEM

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## Central COLLEGE Department of Mathematics COURSE SYLLABUS

### MATH 0308: Fundamentals of Math II

Fall 2010 / Tues-Thurs 10:00-12:00noon / Gay Hall 151 / CRN: 46368

Lab: Gay Hall 119 Thurs 11:00-12:00noon

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**INSTRUCTOR:** Henry Ibekwe, B.S., M.S.  
**CONFERENCE TIMES:** By Appointment Only  
**CONTACT INFORMATION:** [henry.ibekwe@hccs.edu](mailto:henry.ibekwe@hccs.edu), [henri8@math.com](mailto:henri8@math.com)  
**MyMathLab Course ID:** ibekwe28877

**Textbook:**

Prealgebra and Introductory Algebra, 2<sup>nd</sup> Edition. Bittinger, Marvin L. & Ellenbogen, David J.  
Pearson /Addison Wesley: Boston, 2008.

**Catalog Description:**

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

**Prerequisites:** Math 0306: Pass with “C” or better  
Or  
Suitable placement test score.

**Credits:** 3 credit hours (3 Lecture).

**Course Intent:**

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.

**Audience:**

This course is intended for students who require state mandated remediation.

**Make-up policy:**

Any exam makeup will be at the discretion of the instructor and the student must provide sufficient reasons why they were unable to take the exam at the regular scheduled time.

**Grading policy:**

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

Final Average	$90 \leq \text{Avg} \leq 100$	$80 \leq \text{Avg} < 90$	$70 \leq \text{Avg} < 80$	$60 \leq \text{Avg} < 70$	$\text{Avg} < 60$
Final Course Grade	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>F</b>

A grade of “IP” (In Progress) is not longer awarded as of Spring 2008. As of Spring 2008, a grade of D in a developmental mathematics course will qualify the student to enroll in a one-credit hour developmental mathematics course – Math 0106, Math 0108 or Math 0112. Each of Math 0106, Math 0108, and Math 0112 is an abbreviated and accelerated competency – based course in which students are required to complete select objectives, usually comprising one or two instructional units. By enrolling in and successfully completing a “bridge” course during the first four weeks of the semester, the student may then enroll the next level twelve-week, second-start course during the remainder of the semester.

**Determination of Your Final Grade:** There will be 3 or 4 major examinations given in this class plus one comprehensive final examination. Your final course grade is awarded based on the following standard HCCS ten point scale.

1. 3 or 4 test = 40%
2. Homework/Mymathlab = 30%
3. Class participation = 5%;
4. Final Exam = 25%

**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 get a course grade of IP or 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.

**Attendance policy:**

Attendance is checked during every class. When you have accumulated 12.5 % or 6 hours of absences, the instructor is obligated by law to drop you from the class.

**Tardiness policy:**

Students must make sure they come to class on time. You are responsible for any material or discussion missed as a result of their tardiness

**Withdrawal policy:**

If your name is on the roll at the end of the term, you WILL receive a grade. If you wish to drop the class, then it is your responsibility to do that before the final drop date. Neither you nor your instructor will be able to perform the drop after the final drop date. Please refer to the following notice before dropping the class.

NOTICE: Students who take a course three or more times will face significant tuition or fee increases at HCC and other Texas public colleges and universities. In addition, state law dictates that students are allowed a maximum of 6 course withdrawals during their entire college career. Starting in the fall of 2007, students with more than 6 drops will be required to pay additional fees. Prior to course withdrawal, you must confer with your professor or counselor about your study habits, homework, test-taking skills, attendance, course participation, and tutoring or other assistance that is available.

**Homework policy:**

All homework must be completed online using MYMATHLAB. All homework must be completed before the stated due dates.

**Calculators:**

Calculators will be allowed depending on the test difficulty as determined by the instructor.

**Student conduct:**

Students should not engage in disruptive activities while in the classroom. Any conduct that is deemed detrimental to the academic atmosphere, such as cell phone use or consistently talking during instructional delivery, will not be tolerated. Any student found guilty of such conduct will be asked to leave the classroom until further notice.

**Academic dishonesty:**

All students are required to exercise academic honesty in completion of all tests and assignments. Penalties for academic dishonesty (cheating on a test, collusion on an assignment, etc.) include, but are not limited to, a reduced grade, a "0" on that test or assignment, a "W" in the course, or an "F" in the course. The use of recording devices, including camera phones and tape recorders, is prohibited in all locations where instruction, tutoring, or testing occurs. Students with disabilities who need to use a recording device as a reasonable accommodation should contact the Disability Services Office for information.

**Resources and supplemental instruction:**

Any student enrolled in Math 0308 at HCC has access to the tutoring labs where one-on-one help is available. The math tutoring labs are staffed with student assistants who can aid students with math problems and offer help with MYMATHLAB. Please check with your instructor for the hours of the tutoring labs. In addition, free online tutoring is provided. For information, go to the math department web page and select the online tutoring link. Another resource is the student solutions manual that may be obtained from the bookstore.

**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 Office at this college at the beginning of the semester. To make an appointment, please

call 713-718-7910. Professors are authorized to provide only the accommodations requested by the Disability Support Office.

## **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

**Test Schedule:**

Test	Chapters Covered on Test	Date
Test #1	Chapter 8 & 9	TBA
Test #2	Chapter 10, 11 & 12	TBA:
Test #3	Chapter 13 & 14	TBA:
Final Exam	Chapters 8 -14 (2hrs -10:00 am-12:00 pm)	<b><u>TBA:</u></b>

**Course Objectives:**

Upon completion of this course, a student should be able to:

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.
2. Add, subtract, multiply and divide real numbers, and manipulate certain expressions.
3. Solve problems using equations and inequalities. Solve problems using scientific notation.
4. Factor polynomials using the techniques of the greatest common factor, difference of two squares, special trinomials, and grouping.
5. Simplify, multiply, and divide rational expressions.
6. Plot ordered pairs and graph linear equations.