



## Mathematics West Loop Campus

Math 0409: Foundations of Mathematics

CRN 13705 – Summer 2017

Loop Campus – Mondays through Thursdays – Rm C 258 | 5:00 to 8:15 P.M.

4 hour lecture course / 64 hours per semester/ 5 weeks

Textbook: Introductory and Intermediate Algebra. Houston Community College Developmental Math Courses 0409/0312 (Custom Edition). Pearson Learning Solutions: Boston, 2015

ISBN 13: 978-1-323-15682-7.

**MyMathLab Course ID: ranjbaran58203**

**Instructor:** Fahimeh (Farah) Ranjbaran

**Instructor Contact Information:** [Fahimeh.ranjbaran@springbranchisd.com](mailto:Fahimeh.ranjbaran@springbranchisd.com) – Cell (281) 989-8927

**Office location and hours:** By Appointment

### Course Description

Foundations of Mathematics: Topics include real numbers, proportions, descriptive statistics, basic geometry, polynomials, factoring, linear equations, inequalities, linear models, percentage models, order of operations, set operations, and an introduction to other models which may include exponential, quadratic and/or rational models. quadratic equations and rational expressions. A departmental final examination must be passed with a score of 60% or more in order to pass the course. Prerequisite: MATH 0306 or equivalent test score.

### Prerequisites

TSIA Reading Score above 341 or GUST 0339 with a grade of C or higher; TSIA ABE level 5 or 6; TSIA Math Score 336 – 347 with Elementary Algebra Score 5 – 15 and Intermediate Algebra Score 0 – 6; Math 0106: Pass with “C” or better

### Course Goal:

This course is intended for students who have either never been exposed to algebra or who have been away from the subject for quite some time. Particularly, this course is intended to prepare students for the study of Math 0312 or for a non-Calculus-based College Level Math course, specifically Math 1332 or Math 1333.

### Course Student Learning Outcomes (SLO):

1. Identify and apply properties of real numbers, and perform accurate arithmetic operations with numbers in various formats.
2. Demonstrate the ability to manipulate/simplify algebraic expressions, & classify/solve algebraic equations with appropriate techniques.
3. Demonstrate the use of elementary graphing techniques.
4. Apply basic geometric theorems and formulas to rectangles, squares, parallelograms, triangles, parallelograms, triangles and circles.
5. Apply “Proportional Reasoning” to solve related problems including ratios, rates, proportion, percent and conversions of units.
6. Recognize, examine, and interpret the linear, quadratic, exponential, and/or rational models of equations.

### Learning objectives

Students will:

1. add, subtract, multiply and divide real numbers and manipulate certain expressions.
2. find the perimeter and area of rectangles, squares, parallelograms, triangles and circles.
3. solve problems using scientific notation.
4. simplify algebraic expressions.
5. solve problems using equations and inequalities.
6. factor polynomials using the techniques of the greatest common factor, grouping, difference of two squares and trinomials of the form  $x^2 + bx + c$ .
7. multiply and divide, and simplify rational expressions
8. plot ordered pairs and graph linear equations.
9. graph linear inequalities.
10. Find the rate of change of a line & write its equation.
11. Model situations with linear, quadratic, or exponential functions.

## Core Objectives

Given the rapid evolution of necessary knowledge and skills and the need to take into account global, national, state, and local cultures, the core curriculum must ensure that students will develop the essential knowledge and skills they need to be successful in college, in a career, in their communities, and in life. Through the Texas Core Curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world, develop principles of personal and social responsibility for living in a diverse world, and advance intellectual and practical skills that are essential for all learning.

Students enrolled in this core curriculum course will complete a research project or case study designed to cultivate the following 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.

## **Instructional Methods**

This is an on campus class. While you will be logging into Eagle Online for notes, announcements and other important information on a weekly basis, most of the instruction will come from a homework management system called MyMathLab, which must be purchased for this class. The MyMathLab Course ID for this class is **ranjbaran58203**

## **Technical Support**

If you should experience technical difficulties during the semester, these problems are not under the control of the instructor. Such technical problems should be directed to technical support. For Eagle Online tech support, go to the HCC Eagle Online support website call 713-718-2000, options 4, 2, 3 (available 24 x 7). For MyMathLab tech support call **1-800-677-6337 or 1-888-695-6577.**

## **Student Assignments**

Homework and quizzes/assessments will be submitted online through MyMathLab and will count as an exam grade. Four major exams and the final exam will be proctored and taken in class. **No calculators or formula sheets will be allowed on any proctored exam, except for the Geometric Formula sheet.**

## **Final Exam Policy in Developmental Mathematics:**

The following policy was adopted by Houston Community College regarding the system-wide

Final Examinations in developmental mathematics courses:

If a student scores less than a 60 on the Final Exam, then the student receives an **F** in the course. If a student scores at least a 60 on the Final Exam, then the grades will be averaged in accordance with the grade calculation formula as stated on the student syllabus; i.e., the student earns an **A, B, C,** or **F** in the course.

## **Assessments**

There will be 4 major exams, and a final departmental exam. All exams will be graded and returned to students within a week. If you perform below your expectations or fail any test, please set-up a conference with the instructor as soon as possible.

Your final course grade is based on the following standard HCC scale. A grade of "IP" (In Progress) will not be given. If your final grade is a "D", then you may be eligible to take the bridge course MATH 0112 instead of repeating the class. To determine eligibility, please contact the math department. A grade of "F" is given if the final average is below 60 or the final exam grade is below 60.

**The grading formula is as follows:**

$$(E1 + E2 + E3 + E)/4 * 70\% + 30\% * \text{Final Exam} = \text{Semester Grade}$$

AVERAGE	GRADE
90% ≤ Final Average ≤ 100%	A
80% ≤ Final Average < 90%	B
70% ≤ Final Average < 80%	C
Final Average < 70% (or less than 60% In the final exam)	F

**Note:** The instructor cannot assign a grade of IP or W. The grade of “FX” is given when a student fails

### **Final Grade of FX**

Students who stop attending class and do not withdraw themselves prior to the withdrawal deadline may either be dropped by their professor for excessive absences or be assigned the final grade of “FX” at the end of the semester. Students who stop attending classes will receive a grade of “FX”, compared to an earned grade of “F” which is due to poor performance. Logging into a DE course without active participation is seen as non-attending.

Please note that HCC will not disperse financial aid funding for students who have never attended class. Students who receive financial aid but fail to attend class will be reported to the Department of Education and may have to pay back their aid. A grade of “FX” is treated exactly the same as a grade of “F” in terms of GPA, probation, suspension, and satisfactory academic progress.

### **Make - Up Exam Policy**

There will be **NO MAKE-UP EXAM**. If a student is absent for a test, it will count as a zero. The zero will be considered the lowest score, which will be dropped.

### **HCC Policy Statement - ADA**

#### 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 Disability 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 Disability 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](http://www.hccs.edu) then click Future students, scroll down the page and click on the words Disability Information.

#### **Services to Students with Disabilities**

Students who require reasonable accommodations for disabilities are encouraged to report to Dr. Becky Hauri at 713-718-7910 to make necessary arrangements. Faculty is only authorized to provide accommodations by the Disability Support Service Office

### **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](mailto: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](http://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**

Note: As with all developmental mathematics courses at HCC, **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 student's 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 means 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. Arriving late exceeding 10 minutes or leaving early will count as an absence unless you discuss that with me.

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, you are responsible for all material missed. 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 July 31, 2017 by 4:30 P.M.**

### **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**

Everyone will be expected to conduct themselves with courtesy and respect in this classroom.

### **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

### **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 at various campuses. Click on <http://ctle3.hccs.edu/alltutoring/index.php?-link=stuFind> to find the times and locations.

The Learning Emporium at the Central Campus is available to all HCC students for tutoring in Mathematics, among other subjects. You may visit them in SJAC 384 or contact them at 713-714-6356 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](http://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.



<b>July 13</b>	<p>1.7 Properties of Real Numbers</p> <p>1.8 Simplifying Expressions; Order of Operations</p> <p>2.1 Solving Equations: The Addition Principle</p>
<b>July 17</b>	<p>2.2 Solving Equations: The Multiplication Principle</p> <p>2.3 Using the Principles Together</p> <p><b>Test #1 - Chapters 8 &amp; 1</b></p>
<b>July 18</b>	<p>2.4 Formulas</p> <p>2.5 Applications of Percent</p> <p>2.6 Applications and Problem Solving</p>
<b>July 19</b>	<p>2.7 Solving Inequalities</p> <p>2.8 Applications and Problem Solving with Inequalities</p> <p>3.1 Graphs Linear Equations</p> <p>3.2 More with Graphing and Intercepts</p>
<b>July 20</b>	<p>3.3 Slope and Applications</p> <p>3.5 Graphing Using the Slope and the y-Intercept</p> <p>3.7 Graph Linear Inequalities in Two Variables</p>
<b>July 24</b>	<p><b>Test #2 Chapters 2 &amp; 3</b></p> <p>4.1 Integers as Exponents</p> <p>4.2 Exponents and Scientific Notation</p>
<b>July 25</b>	<p>4.3 Introduction to Polynomials</p> <p>4.4 Addition and Subtraction of Polynomials</p> <p>4.5 Multiplication of Polynomials</p>
<b>July 26</b>	<p>4.6 Special Products</p> <p>4.7 Operations with Polynomials in Several Variables</p> <p>4.8 Division of Polynomials (Monomials Divisors Only)</p>
<b>July 27</b>	<p>5.1 Introduction to Factoring (GCF and Grouping)</p> <p>5.2 Factoring Trinomials (of the type <math>x^2 + bx + c</math> only)</p> <p>5.3 Factoring Trinomial Squares and Differences of Squares</p>

<b>July 31</b>	<b>5.4 Factoring: A General Strategy (Omit <math>ax^2 + bx + c</math>, <math>a \neq 1</math>) Test Review</b>
<b>August 1</b>	<b>Test #3 Chapters 4 &amp; 5</b>
<b>August 2</b>	<b>6.1 Multiplication and Simplifying Rational Expressions (Omit <math>ax^2 + bx + c</math>, <math>a \neq 1</math>) 6.2 Division and Reciprocals (Omit <math>ax^2 + bx + c</math>, <math>a \neq 1</math>)</b>
<b>August 3</b>	<b>6.7 Rational Equations and applications (Proportions only) 7.1 Introduction to Radical Expressions (Include Perfect Square Radicands Only)</b>
<b>August 7</b>	<b>Test Review</b>
<b>August 8</b>	<b>Test #4 – Chapters 6 and 7</b>
<b>August 9</b>	<b>Final Exam Review</b>
<b>August 10</b>	<b>Final Exam – 5 to 7 P.M.</b>

**Important Dates: Drop Deadline: Monday, July 31, 2017 by 4:30 p.m.**

Remember, you must have counselor approval 24 hours prior to dropping the course.