

**Division of College Readiness**

**Developmental Math Department**

https://learning.hccs.edu/programs/developmental-mathematics

MATH 0314: Intermediate Algebra | Lecture | #16772

Spring 2019 | 16 Weeks (1-14-2019 to 05-12-2019)

In-Person | West Loop Campus – Rm C247 | Sundays 2 p.m.-4:50 p.m.

3 Credit Hours | 48 hours per semester

**Course Code or ID: 6EKUM-GVWVL**

### Instructor Contact Information

Instructor: **Fahimeh (Farah) Ranjbaran** Cell Phone: 281-989-8927

Office: Classroom Office Hours: By Appointment Only

Email: Fahimeh.ranjbaran@springbranchisd.com (preferred)

HCC Email: Fahimeh.ranjbaran@springbranchisd.com

Office Location: Classroom

Please feel free to contact me concerning any problems that you are experiencing in this course. Your performance in my class is very important to me. I am available to hear your concerns and just to discuss course topics.

## Instructor’s Preferred Method of Contact

My preferred email address is the Spring Branch email address. You may also contact me via text message or by phone. I will respond to emails within 24 hours Monday through Friday; I will reply to weekend messages on Monday mornings.

### What’s Exciting About This Course

This course has been designed to guide students to the skills that are necessary to succeed in a College Algebra course, a course which is often the first step into a career in STEM. In this course you will practice the skills and techniques to tackle rigorous algebraic problems and gain the practice and experience to do so comfortably. Also, as one of our co-requisite developmental courses, you may be taking this class in the same semester as College Algebra, getting the time, guidance, and support to help you succeed in your college-level course all in one semester.

### My Personal Welcome

I like to welcome you to my class and am excited to work with you this semester. My hope is that you learn and improve your math skills in this class, so you will be prepared and successful in your future math courses.

### Prerequisites and/or Co-Requisites

MATH 0314 requires either that a student has passed MATH 0309 with a “C” or better **OR** TSIA Math Score 336-349 with Intermediate Algebra score 4-15 **OR** an equivalent score on a Placement Exam

MATH 0314 is a co-requisite to MATH 1314. Since MATH 0314 is co-requisite with MATH 1314, withdrawing from MATH 0314 will necessitate withdrawal from MATH 1314 as well. Please carefully read and consider the repeater policy in the [HCCS Student Handbook.](http://www.hccs.edu/resources-for/current-students/student-handbook/)



### Eagle Online Canvas Learning Management System

This section of MATH 0314 has associated with it a course in [Eagle Online Canvas](https://eagleonline.hccs.edu/login/ldap) (<https://eagleonline.hccs.edu>). HCCS Open Lab locations may be used to access the Internet and Eagle Online Canvas. It is recommended that you **USE** [**FIREFOX**](https://www.mozilla.org/en-US/firefox/new/) **OR** [**CHROME**](https://www.google.com/chrome/browser/desktop/index.html) **AS YOUR BROWSER**.

## Review Guides, Supplemental Material, etc.

Look in Eagle Online Canvas for information to assist you in the course. <https://eagleonline.hccs.edu/login/ldap>

# Instructional Materials

### Textbook Information

|  |  |
| --- | --- |
| C:\Users\victor.hernandez7\Desktop\Math 0314 Book Cover.jpg | The textbook listed below is ***required*** for this course. ***Intermediate Algebra Math 0314*** (Custom edition by McGraw Hill Publishing). ISBN: 978-1-26-08492-40 (textbook and access code) ISBN: 978-1-26-08492-57 (access code with e-book) **You must have access to the book in the classroom. You may use the actual physical book or access the E-Book through your personal computer.** |

### Temporary Free Access to E-Book

This course has associated with it a Connect Math course. **You MUST do your homework in Connect Math before the deadline as it counts as a test grade.**

To access the Connect Math course, including temporary free access to the online eBook, go to [www.connectmath.com](http://www.connectmath.com) and register using the Connect Math Course ID: **6EKUM-GVWVL**

### Other Instructional Resources

## Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services](http://www.hccs.edu/resources-for/current-students/tutoring/) website for services provided.

## Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries’ resources and services is the HCCS library web page at [http://library.hccs.edu](http://library.hccs.edu/).

## Supplementary Instruction

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at <http://www.hccs.edu/resources-for/current-students/supplemental-instruction/>.

# Course Overview

Math 0314: Intermediate Algebra is a developmental math course whose topics include factoring techniques, radicals, algebraic fractions, absolute values, complex numbers, graphing linear equations and inequalities, quadratic equations, systems of equations, graphing quadratic equations and an introduction to functions. Emphasis is placed on algebraic techniques needed in order to successfully complete Math 1314: College Algebra. A departmental final examination must be passed with a score of 60% or more in order to pass the course.

### Core Curriculum Objectives (CCOs)

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.

* **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

### Program Student Learning Outcomes (PSLOs)

During courses in the developmental math program students will

1. Engage in problem solving strategies, such as organizing information, drawing diagrams, and modeling.
2. Use symbolic representations to solve problems. This includes manipulating formulas, solving equations, and graphing lines.
3. Learn the foundational mathematical skills that will enable a student to successfully complete a college level math course.

### Course Student Learning Outcomes (CSLOs)

Upon completion of MATH 0314, the student will be able to:

1. Define, represent, and perform operations on real and complex numbers.
2. Recognize, understand, and analyze features of a function.
3. Recognize and use algebraic (field) properties, concepts, procedures (including factoring), and algorithms to combine, transform, and evaluate absolute value, polynomial, radical, and rational expressions.
4. Identify and solve absolute value, polynomial, radical, linear and rational equations.
5. Identify and solve absolute value and linear inequalities.
6. Model, interpret and justify mathematical ideas and concepts using multiple representations.
7. Connect and use multiple strands of mathematics in situations and problems, as well as in the study of other disciplines.

### Learning Objectives

Upon completion of MATH 0314, the student will be able to:

1. add, subtract, multiply and divide polynomials
2. factor polynomials
3. multiply and divide rational expressions
4. simplify complex fractions
5. solve equations involving rational expressions
6. simplify expressions involving rational exponents
7. solve radical equations
8. add, subtract, multiply and divide complex numbers
9. solve quadratic equations by factoring, completing the square, quadratic formula and square root property
10. solve one-variable linear equations and inequalities
11. solve absolute value equations
12. solve absolute value inequalities
13. graph linear equations in two variables
14. find the slope of a line & write its equation
15. solve a 2 × 2 linear system of equations by the substitution and addition methods
16. graph quadratic functions
17. solve word problems
18. recognize functional notation & evaluate functions

# Student Success

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Math cannot be learned by merely reading or hearing about it, you must spend the time to practice. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

* Reading the textbook
* Attending class
* Completing assignments
* Participating in class

There is no short cut for success in this course; it requires time and dedication.

### Instructor and Student Responsibilities

As your Instructor, it is my responsibility to**:**

* Provide the grading scale and detailed grading formula explaining how student grades are to be derived
* Facilitate an effective learning environment through learner-centered instructional techniques
* Provide a description of any special projects or assignments
* Inform students of policies such as attendance, withdrawal, tardiness, and make up
* Provide the course outline and class calendar which will include a description of any special projects or assignments
* Arrange to meet with individual students before and after class as required

As a student, it is your responsibility to**:**

* Attend class
* Participate actively by reviewing course material, practicing the material, and responding promptly in your communication with me
* Read and comprehend the textbook
* Complete the required assignments and exams
* Ask for help when there is a question or problem
* Keep copies of all paperwork, including this syllabus, handouts, and all assignments
* Attain a raw score of at least 60% on the departmental final exam
* Be aware of and comply with academic honesty policies in the [HCCS Student Handbook](http://www.hccs.edu/resources-for/current-students/student-handbook/)

# Assignments, Exams, and Activities

### Exams

There are four (4) in class major exams at 100 points each, Connect Math Homework assignment at 100 points, and a departmental final exam. The worse major exam/Connect Math grade will be dropped. Each major exam/Connect Math will count 17.5%. Final exam will count 30%.

### Midterm and Final Exams

All students will be required to take a cumulative departmental midterm exam consisting of 25 multiple choice questions and a cumulative departmental final exam consisting of 33 multiple-choice questions. Students must provide their own Scantron forms. You must get at least 60% (20 of 33) of the items correct on the final to pass the course (departmental decision).

### Grading Formula

Your final course grade is based on the following standard HCC scale. A grade of “IP” (In Progress) will not be given. A grade of “F” is given if the final average is below 60 or the final exam grade is below 60. The lowest grade out of the 5 exam grade (4 exams and Connect Math homework grade) will be dropped. Then 70% of the remaining four exam grades and 30% of the final exam will determine your semester grade.

**At the end of the semester, your overall grade will be computed as follows:**

**Drop the lowest grade out of the 4 test grades, which includes Exam I, II or III, IV, and Connect Math homework grade (Exam V) but not the midterm or the final exam grade. Then:**

**(E1 + Midterm + E3 + E4)/4 \* 70% + 30% \*Final Exam = Semester Grade**

|  |  |
| --- | --- |
| **Grade** | **Percent** |
| A | 90% + |
| B | 80% - 89% |
| C | 70% - 79% |
| F/IP | 0% - 69% |

Note: Any student that has failed this course for the first time is eligible to receive an IP. Any subsequent failures will receive an F.

## HCC Grading Scale can be found on this site under Academic Information:

[**http://www.hccs.edu/resources-for/current-students/student-handbook/**](http://www.hccs.edu/resources-for/current-students/student-handbook/)

# Course Calendar

## Please see Tentative Calendar at the bottom of the syllabus.

## Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

# Instructor’s Practices and Procedures

## Missed Assignments

There are no Make-up exams. If you are absent for a test, it will count as a zero and will be dropped as the lowest grade. Only 1 grade will be dropped.

## Academic Integrity

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 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.

Here’s the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):

<http://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/>

## Attendance Procedures

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.

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.

**The last day to withdraw from this course is April 31, 2019**

## Student Conduct

I expect all students to pay attention, be on task, and work in the classroom. Use of cell phone and social media in prohibited in the classroom. I expect all students to be respectful to their classmates, classroom instructions, and to the instructor. If you experience any distraction in the classroom, please let me know in private before or after class.

## Electronic Devices

No Cell Phone in the classroom.

No use of Social Media on cell phone or personal computer during class.

Calculators may be used for the midterm and the final exam only.

Per department policy, Math 0314 students will be allowed the use of a basic calculator during the departmental midterm exam and the departmental final exam. Students should provide their own basic calculator. Scientific and graphing calculators are prohibited.

The use of any calculator during any exam other than the departmental midterm exam and departmental final exam is prohibited and will be considered cheating (see academic integrity section above).

# Developmental Math Program Information

For more information on the developmental math program visit:

https://learning.hccs.edu/programs/developmental-mathematics

# HCC Policies

Here’s the link to the HCC Student Handbook <http://www.hccs.edu/resources-for/current-students/student-handbook/> In it you will find information about the following:

|  |  |
| --- | --- |
| Academic Information | Incomplete Grades |
| Academic Support | International Student Services |
| Attendance, Repeating Courses, and Withdrawal | Health Awareness |
| Career Planning and Job Search | Libraries/Bookstore |
| Childcare | Police Services & Campus Safety |
| disAbility Support Services | Student Life at HCC |
| Electronic Devices | Student Rights and Responsibilities |
| Equal Educational Opportunity | Student Services |
| Financial Aid TV (FATV) | Testing |
| General Student Complaints | Transfer Planning |
| Grade of FX | Veteran Services  |

## EGLS3

The EGLS3 ([Evaluation for Greater Learning Student Survey System](http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/)) will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS3 surveys are only available for the Fall and Spring semesters. EGLS3 surveys are not offered during the Summer semester due to logistical constraints.

<http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/>

## Campus Carry Link

Here’s the link to the HCC information about Campus Carry: <http://www.hccs.edu/departments/police/campus-carry/>

## HCC Email Policy

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go [to HCC Eagle ID](http://www.hccs.edu/resources-for/current-students/student-e-maileagle-id/) and activate it now. You may also use Canvas Inbox to communicate.

## Housing and Food Assistance for Students

Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Students at their college for support. Furthermore, please notify the professor if you are comfortable in doing so.

This will enable HCC to provide any resources that HCC may possess.

# Office of Institutional Equity

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement (<http://www.hccs.edu/departments/institutional-equity/>)

## disAbility Services

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to <http://www.hccs.edu/support-services/disability-services/>

## Title IX

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence.  Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual’s fundamental rights and personal dignity.  Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status in educational programs and activities.  If you require an accommodation due to pregnancy please contact an Abilities Services Counselor.  The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator.  All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross
Director EEO/Compliance
Office of Institutional Equity & Diversity
3100 Main
(713) 718-8271
Houston, TX 77266-7517 or Institutional.Equity@hccs.edu

<http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/>

# Office of the Dean of Students

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>

# Department Chair Contact Information

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| **College Level Math Courses** |
| Susan Fife - Chair of Mathematics | SW Campus | 713-718-7241 | Stafford, Scarcella, N108 |
| Jaime Hernandez - Associate Chair | CE Campus | 713-718-7772 | San Jacinto Building, Rm 369 |
| Ernest Lowery- Associate Chair | NW Campus | 713-718-5512 | Katy Campus Building, Rm 112 |
| Mahmoud Basharat- Associate Chair | NE Campus | 713-718-2438 | Codwell Hall Rm 105 |
| Tiffany Pham - Admin. Assistant | SW Campus | 713-718-7770 | Stafford, Scarcella, N108 |
| Christopher Cochran- Admin. Assistant | SW Campus | 713-718-2477 | Stafford, Scarcella, N108 |
|  |  |  |  |  |
| **Developmental Math Courses** |
| Marisol Montemayor- Chair of Dev Math | SE Campus | 713-718-7153 | Felix Morales Building, Rm 124 |
| Hien Nguyen- Associate Chair | SE Campus | 713-718-2440 | Felix Morales Building, Rm 124 |
| Jack Hatton- Associate Chair | NE Campus | 713-718-2434 | Northline Building, Room 321 |
| Carmen Vasquez- Admin. Assistant | SE Campus | 713-718-7056 | Felix Morales Building, Rm 124 |

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

If you need to contact departmental administration, contact the appropriate Associate Chair.

If further administrative contact is necessary, contact the appropriate Department Chair.

**Tentative Schedule for Math 0314 – Spring 2019**

Jan 20 1.1 Linear Equations in One Variable

1.2 Applications of Linear Equations in One Variable (applications involving mixtures and applications involving distance rate and time only)

 1.4 Linear Inequalities in One Variable (omit applications of inequalities)

Jan 27 1.5 Compound Inequalities (omit applications of compound inequalities)

1.6 Absolute Value Equations

 1.7 Absolute Value Inequalities

Feb 3 2.1 Linear Equations in Two Variables

2.2 Slope of a Line and Rate of Change (omit parallel and perpendicular lines, omit applications and interpretation of slope)

 2.3 Equations of a Line (omit parallel and perpendicular lines)

Feb 10 2.5 Introduction to Relations (this entire section is optional)

2.6 Introduction to Functions

**Feb 17 Test 1 – Chapters 1 & 2**

4.1 Properties of Integer Exponents and Scientific Notation (omit scientific notation)

4.2 Addition and Subtraction of Polynomials and Polynomial Functions

Feb 24 4.3 Multiplication of Polynomials (omit translations involving a polynomial, omit applications involving a product of polynomials)

4.4 Division of Polynomials (omit synthetic division)

 4.5 Greatest Common Factor and Factoring by Grouping

March 3 4.6 Factoring Trinomials (omit factoring trinomials by trial and error method)

4.7 Factoring Binomials (omit factoring binomials of the type x^6+y^6) (Note: There is a factor summary section after the practice exercises and a corresponding Connect assignment)

 4.8 Solving Equations by Using the Zero Product Rule (omit applications of quadratic equations, omit applications of quadratic functions)

**March 10 Test II – Midterm**

5.1 Rational Expressions and Rational Functions (omit graphs of rational functions, include finding the domain)

 5.2 Multiplication and Division of Rational Expressions

**March 17 Happy Spring Break**

March 24 5.3 Additions and Subtraction of Rational Expressions

 5.4 Complex Fractions

5.5 Solving Rational Equations

March 31 5.6 Applications of Rational Equations and Proportions (applications of rational equations only, omit first 3 parts)

 3.1 Systems of Linear Equations by the Graphing Method (this entire section is optional)

3.2 Systems of Linear Equations by the Substitution Method

 3.3 Systems of Linear Equations by the Addition Method

**April 7 Test III – Chapters 3 & 5**

6.1 Definition of the nth Root (omit radical functions)

6.2 Rational Exponents (omit applications involving rational exponents)

April 14 6.7 Solving Radical Equations (omit applications of radical equations and functions)

6.8 Complex Numbers

6.9 Distance Formula, Midpoint Formula, and Circles (this entire section is optional)

**April 21 Happy Easter**

April 28 7.1 Square Root Property and Completing the Square (omit literal equations)

7.2 Quadratic Formula

7.4 Graphs of Quadratic Function

**May 5 Exam 4**

**May 12 Final Exam – 2 to 4 P.M.**