

**Division of Mathematics**

**Mathematics Department**

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

# Math 1350: Mathematics for Elementary Teachers I| Lecture | CRN 16500

# Fall 2020 Semester | 16 Weeks (8.24.20-12.15.20)

**Online**

3 Credit Hours | 48 hours per semester

## Instructor Contact Information

Instructor: Navid Tabrizi Office Phone: 713-718-0000

Office: Spring Branch Room 900F Office Hours: M-R 9:30-10:45 a.m.

HCC Email: navid.tabrizi@hccs.edu Office Location: Spring Branch

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 the concerns and just to discuss course topics.

### Instructor’s Preferred Method of Contact

**HCC Email or phone ( 713-718-7015 )** 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

One exciting aspect of this course is the methodology of teaching mathematical concepts to elementary school students

## My Personal Welcome

Welcome to Math 1350 online.—I’m delighted that you have chosen this course! One of my passions is to know as much as I can about human behavior, and I can hardly wait to pass that on. I will present the information in the most exciting way I know, so that you can grasp the concepts and apply them now and hopefully throughout your life.

As you read and wrestle with new ideas and facts that may challenge you, I am available to support you. The fastest way to reach me is by my HCC email. The best way to really discuss issues is in person and I’m available during posted office hours to tackle the questions. My goal is for you to walk out of the course with a better understanding of yourself and of human behavior. So please visit me or contact me by email whenever you have a question.

## Prerequisites and/or Co-Requisites

Prerequisites: A grade of C or better in Math 1314 or its equivalent. If you have enrolled in this course having satisfied these prerequisites, you have a higher chance of success than students who have not done so. Please carefully read and consider the repeater policy in the [HCCS Student Handbook.](http://www.hccs.edu/resources-for/current-students/student-handbook/)

## Canvas Learning Management System

This section of MATH 1350 will use [Canvas](file:///C:\Users\Matt%20Webster\AppData\Local\Temp\Canvas) (<https://eagleonline.hccs.edu>) to supplement in-class assignments, exams, and activities. Please navigate through the features of Canvas

**It is imperative to log into your Canvas as frequently as possible to check your grades, read the announcements , to interact with your fellow classmates , and to access the assignments.**

HCCS Open Lab locations may be used to access the Internet and Canvas. **USE** [**FIREFOX**](https://www.mozilla.org/en-US/firefox/new/) **OR** [**CHROME**](https://www.google.com/chrome/browser/desktop/index.html) **AS THE INTERNET BROWSER**.

### HCC Online Information and Policies

Here is the link to information about HCC Online classes including the required Online Orientation for all fully online classes: <http://www.hccs.edu/online/>

# Instructional Materials

**Textbook Information**

|  |  |
| --- | --- |
| https://pictures.abebooks.com/isbn/9780135183885-us-300.jpg | The textbook listed below is ***required*** for this course.  **A Problem Solving Approach to Mathematics for Elementary Teachers, 13th ed;** By Billstein, Libeskind, and Lott, Addison-Wesley, 2020 ISBN-13: 978-0136480276  It is included in a package that contains the text as well as an access code and are found at the [HCC Bookstore](https://hccs.bncollege.com/webapp/wcs/stores/servlet/BNCBHomePage?storeId=19561&catalogId=10001&langId=-1). You may either use a hard copy of the book or the e-book through MyMathLab. |

## Temporary Free Access to E-Book

For temporary free access to MathLab and the online eBook, go to [www.Coursecompass.com](http://www.Coursecompass.com) and register using the MathLab : See registration instructions inside Canvas ( Course ID is not required.

**You must register from inside Canvas** , **See Registration Instructions in Canvas**

## 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

This course is intended for students who are planning to major in Elementary Education. It includes Concepts of sets, functions, numeration systems, number theory, and properties of the natural numbers, integers, rational, and real number systems with an emphasis on problem solving and critical thinking.

## 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***: 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.
* ***Quantitative and Empirical Literacy***: to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

## Program Student Learning Outcomes (PSLOs)

Students in the Mathematics Program 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. Build the foundational mathematical skills that will enable a student to successfully complete a college level mathematics course.

## Course Student Learning Outcomes (CSLOs)

Upon completion of MATH 1350, the student will be able to:

1. Explain and model the arithmetic operations for whole numbers and integers.
2. Explain and model computations with fractions, decimals, ratios, and percentages.
3. Describe and demonstrate how factors, multiples, and prime numbers are used to solve problems.
4. Apply problem solving skills to numerical applications.
5. Represent and describe relationships among sets using the appropriate mathematical terminology and notation.
6. Compare and contrast structures of numeration systems.

## Learning Objectives

Upon completion of MATH 1350, the student will be able to:

1. Understand sets, set notation, and set operations.
2. Perform the arithmetic of whole numbers, integers, rational numbers, decimals, and real numbers.
3. Explain and model the arithmetic operations for whole numbers and integers.
4. Explain and model computations with fractions, decimals, ratios, and percentages.
5. Convert a repeating decimal to rational form.
6. Understand prime numbers and composite numbers.
7. Define divisibility and perform divisibility tests.
8. Define and compute the least common multiple and the greatest common divisor of two integers.
9. Explain various types of number systems.

# 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. Additional time will be required for written assignments. 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 in person and/or online
* Completing assignments
* Participating in class activities

There is no short cut for success in this course; it requires reading (and probably re-reading) and studying the material using the course objectives as a guide.

## 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 making up assignments
* Provide the course outline and class calendar that 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 in person and/or online
* Participate actively by reviewing course material, interacting with classmates, 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
* 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

**All the course assignments will be administered via MML from inside Canvas. You must take your Midterm as well as the Final Exam at the HCC Testing Center in-person on ( unless otherwise advised due to COVID 19 ) . Please check the dates inside Canvas Course**

## Final Exam

**All students will be required to take a cumulative Final exam at the HCC Testing Center at the Central College.**

## Grading Formula

Students can use MML to estimate their current Grade according to the following formula:

**Homework 20% of your grade**

**Chapter Test 35% of your grade**

**Midterm Exam 20% of your grade**

**Final Exam 25% of your grade**

|  |  |
| --- | --- |
| **Grade** | **Overall Percentage** |
| A | 90% + |
| B | 80%-89% |
| C | 70%- 79% |
| D | 60%-69% |
| F | <60% |

### Incomplete Policy:

In order to receive a grade of Incomplete (“I”), a student must have completed at least 85% of the work in the course. In all cases, the instructor reserves the right to decline a student’s request to receive a grade of Incomplete.

### 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 check the due dates inside Canvas or via MML assignments**

|  |  |  |
| --- | --- | --- |
| **Week** | **Dates** | **Topic/What’s due** |
| 1 |  | Syllabus  Chapter 2 |
| 2,3 |  | Chapter 2 |
| 4,5 |  | Chapter 3 |
| 6,7,8 |  | Chapter 4 **Review as well as** **Midterm Exam** |
| 9,10 |  | Chapter 5 |
| 11,12 |  | Chapter 6 |
| 13,14 |  | Chapter 7 |
| 15 |  | Chapter 8 |
| 16 |  | **Review and Final Exam** |

## 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

All Homework assignments can be accessed after the due days. But, there will be a 10% penalty applied to any work completed past the due dates.

## Academic Integrity

All forms of academic dishonesty including, but not limited to cheating, plagiarism, and collusion are serious offenses. Possible consequences for academic dishonesty include a grade a 0 or F in the particular assignment, failure in the course, and/or recommendations for probation or dismissal from the institution.

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

Insert a specific description of your expectations for attendance. Be specific about In-Person, Hybrid, and Online classes. Include your practice regarding withdrawals, never attending, etc.

**The last day to withdraw Friday October 30th, 2020.**

## Student Conduct

Professional conduct is expected.

# Mathematics Program Information

* HCC Math Student Organizations: Mu Alpha Theta: Application: <https://www.hccs.edu/resources-for/current-students/stem--science-technology-engineering--mathematics/stem-clubs/mu-alpha-theta-application/>

# 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
* Academic Support
* Attendance, Repeating Courses, and Withdrawal
* Career Planning and Job Search
* Childcare
* disAbility Support Services
* Electronic Devices
* Equal Educational Opportunity
* Financial Aid TV (FATV)
* General Student Complaints
* Grade of FX
* Incomplete Grades
* International Student Services
* Health Awareness
* Libraries/Bookstore
* Police Services & Campus Safety
* Student Life at HCC
* Student Rights and Responsibilities
* Student Services
* Testing
* Transfer Planning
* 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 long and short term conditions, 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](mailto: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** | | | | |
| Chair of Math | Susan Fife | SW Campus | 713-718-7241 | Stafford, Scarcella, N108 |
| - Admin. Assistant | Tiffany Pham | SW Campus | 713-718-7770 | Stafford, Scarcella, N108 |
| - Admin. Assistant | Christopher Cochran | SW Campus | 713-718-2477 | Stafford, Scarcella, N108 |
| Math Assoc. Chair | Jaime Hernandez | CE Campus | 713-718-7772 | San Jacinto Building, Rm 369 |
| Math Assoc. Chair | Ernest Lowery | NW Campus | 713-718-5512 | Katy Campus Building, Rm 112 |
| Math Assoc. Chair | Mahmoud Basharat | NE Campus | 713-718-2438 | Codwell Hall Rm 105 |
|  |  |  |  |  |
| **Developmental Math Courses** | | | | |
| Chair of Dev. Math | Jack Hatton | SE Campus | 713-718-2434 | Felix Morales Building, Rm 124 |
| - Admin. Assistant | Carmen Vasquez | SE Campus | 713-718-7056 | Felix Morales Building, Rm 124 |
| Dev. Math Assoc. Chair | Hien Nguyen | SE Campus | 713-718-2440 | Felix Morales Building, Rm 124 |
| Dev. Math Assoc. Chair | Adnan Ulhaque | SW Campus | 713-718-5463 | Stafford, Learning Hub, Room 208 |
| Technical Support Specialist | Douglas Bump | SE Campus | 713-718-7317 | Angela Morales Building, Rm 101 |

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

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

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

**Course Outline**:

**APPROXIMATE TIME** **TEXT REFERENCE**

Chapter 2 – **Introduction to Logic and Sets** Sections:

2-1 (optional) 2-2, 2-3

The unit begins with an optional introduction to Logic. It continues with discussions of, bases, sets and set notation, and set operations.

Chapter 3 – **Whole Numbers and Their Operations**

Sections: 3-1, 3-2, 3-3, 3-4, 3-5

This unit includes numeration systems (Hindu-Arabic, Egyptian, Roman), algorithms for whole number arithmetic and estimation.

Chapter 4 – **Number Theory** Sections: 4-1, 4-2, 4-3

Chapter 5 – **Integers** Sections: 5-1, 5-2

These chapters investigate integers and the operations of addition, subtraction, multiplication and division. It includes prime numbers and the Greatest Common Divisor and Least Common Multiple.

Chapter 6 – **Rational Numbers and Proportional Reasoning** Sections: 6-1, 6-2, 6-3, 6-4

This chapter introduces rational numbers and the arithmetical operations on them. It includes ratios and proportions.

Chapter 7 – **Decimals: Rational Numbers and Percent** Sections: 7-1, 7-2, 7-3, 7-4

This chapter introduces decimals as fractions and as an extension of the base-ten system. This unit includes operations on decimals, properties of decimals, and percent.

Chapter 8 – **Real Numbers and Algebraic Thinking** Sections: 8-1, 8-2, 8-3, 8-4

This chapter introduces real numbers and basic algebraic concepts including an introduction to functions.