HCC | HOUSTON COMMUNITY COLLEGE

Division of Mathematics
Mathematics Department
https://learning.hccs.edu/programs/mathematics

Math 1332: Contemporary Mathematics | Lecture | CRN#11358
Fall 2019 | 12 Weeks (09.23.2019-12.15.2019)
In-Person | Northline 216 | MW 12 Noon-01:50 p.m.
3 Credit Hours | 48 hours per semester

Instructor Contact Information

Instructor: Mohammad Afaneh, M.A.   Office Phone: 713-718-2163
Office: Northline, Room 321   Office Hours: M-R 2 – 3 PM
HCC Email: Mohammad.Afaneh@hccs.edu   Office Location: Northline Faculty Area

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
Email: Mohammad.Afaneh@hccs.edu

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

We will look at real life situation and apply what we learn in class to these situations. For example, how to calculate interests paid on a mortgage loan.

My Personal Welcome

Welcome to Contemporary Mathematics—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 0309 or its equivalent or an acceptable placement score. A grade of C or better in Math 0310 or Math 0314 its equivalent or an acceptable placement score.
Co-Requisites: MATH 0332 is a co-requisite to MATH 1332. Since MATH 0332 is co-requisite with MATH 1332, withdrawing from either MATH 0332 or Math 1332 will necessitate withdrawal from the other as well. Please carefully read and consider the repeater policy in the HCCS Student Handbook.

Canvas Learning Management System

This section of MATH 1332 will use Canvas (https://eagleonline.hccs.edu) to supplement in-class assignments, exams, and activities. I will post your grades in canvas.
HCCS Open Lab locations may be used to access the Internet and Canvas. **USE FIREFOX OR CHROME AS THE INTERNET BROWSER**.

Scoring Rubrics, Sample Assignments, etc.
Look in Canvas for the scoring rubrics for assignments, samples of class assignments, and other information to assist you in the course. https://eagleonline.hccs.edu/login/ldap

Instructional Materials
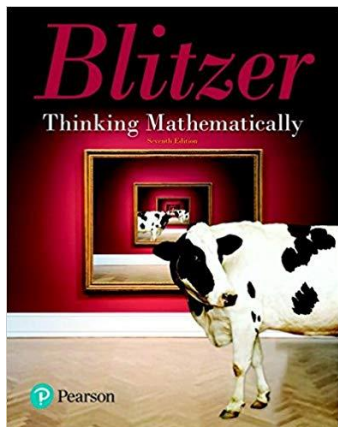
The textbook listed below is *required* for this course.
Thinking Mathematically, 7th ed By Robert Blitzer, Pearson, 2016 ISBN-13: 978-0135323038

It is included in a package that contains the text as well as an access code and are found at the HCC Bookstore. 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.pearson.com and register using the MathLab Course ID: afaneh40792

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 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.

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 designed as a review of advanced topics in algebra for science and engineering students who plan to take the calculus sequence in preparation for their various degree programs. It is also intended for non-technical students who need college mathematics credits to fulfill requirements for graduation and prerequisites for other courses. It is generally transferable as math credit for non-science majors to other disciplines.

Course Description
MATH 1332: Mathematics for Liberal Arts is a course designed for liberal arts, non-mathematics, non-science, and non-business majors. The course provides students with an appreciation of the history, art, and beauty of mathematics in the world around us.

Prerequisites: A grade of C or better in Math 0309 or meet TSI college-readiness standard for college-level mathematics.

Co-requisite: MATH 0309 is a co-requisite to MATH 1332. Since MATH 0309 is co-requisite with MATH 1332, withdrawing from MATH 0309 will necessitate withdrawal from MATH 1332 as well.

Course Goal
The intent of this course is to provide the student certain manipulative skills with limits insofar as they apply to concrete but elementary problems in the social and natural sciences. Mathematical rigor will be kept to a minimum.

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 1332, the student will be able to:
1. Apply the language and notation of sets.
2. Use the tools of logic to determine the validity of an argument or statement.
3. Solve problems in mathematics of finance.
4. Demonstrate fundamental probability techniques and apply those techniques to solve problems.
5. Interpret and analyze various representations of data.
6. Demonstrate the ability to choose and analyze mathematical models to solve problems from real-world settings, including, but not limited to, personal finance, health literacy, and civic engagement.

Learning Objectives

Upon completion of MATH 1332, the student will be able to:
1. Use Venn diagrams to solve application problems.
2. Identify sets and subsets and perform set operations.
3. Be familiar with the basic concepts of probability.
4. Express statements using symbols.
5. Form the negation of a statement.
6. Express compound statements symbolically.
7. Construct truth tables.
8. Determine truth value of compound statements.
9. Use truth tables to show that statements are equivalent.
10. Use truth tables to determine validity of arguments.
11. Convert fractions and decimals to percents.
12. Convert percents to decimals and fractions.
13. Find simple and compound interest.
14. Find the future value of a given annuity.
15. Find the monthly payment and the total interest for a given simple interest amortized loan.
16. Find the probability of an event.
17. Use tree diagrams to find possible outcomes and use combinations and permutations.
18. Solve application problems involving probability.
19. Be familiar with the fundamentals of statistics.
20. Assess a statistical study.
21. Find the mean, median, and mode of given sets of raw data.
22. Interpret statistical tables and graphs.
23. Identify normal and skewed distribution curves.
24. Determine variance and standard deviation from a given sample.
25. Find the margin of error associated with a given sample.
26. Apply linear and quadratic functions.
27. Apply exponential and logarithmic 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. 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

Assignments, Exams, and Activities

Exams

We will have three In-Class exams, and the FinalExam.

In-Class Activities

Quizzes, group assignments and worksheets.

Final Exam

All students will be required to take a cumulative Final exam.

Final Exam Review Sessions: HCC MATH DAYS

The statement below is For RT, SS, and F8B sessions only. If you are teaching a section of this course in the F8A session, then please remove this statement below from your student syllabus.

The Math Department will offer several Final Exam Review sessions (i.e., **HCC Math Days**) for this course near the end of the semester (Fall and Spring semesters only). We encourage you to attend at least one of these sessions as you prepare for the comprehensive Final Exam. Your professor will provide you with more information regarding HCC Math Days locations and session times later in this semester.

While the full-time Math Department faculty leading these review sessions are prepared to answer students' questions on a variety of course topics, the **Final Exam Study Guide** will provide the basis for the HCC Math Days sessions. Therefore, to get the most out of these review sessions, be sure review and to work through the **Final Exam Study Guide** before you attend the review session(s). Please ask your professor if you have any questions regarding these sessions. Finally, the Math 1332 **Final Exam Study Guide** and the **dates** for the Math Days review sessions are located at:
https://cofinite.com/MathDays/Math1332.php

Grading Formula

Average = E1*.2+E2*0.2+E3*0.2+HW*.1+In-Class*.05+Final*0.25
In addition, you can see your grades in Canvas.

Exam 1	20% of your grade
Exam 2	20% of your grade
Exam 3	20% of your grade
Homework	10% of your grade
In-Class Activities	5% 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%

For distance Ed (Online courses):
The Math Department requires that at least **45%** of your course grade will consist of scores from *at least two in-person proctored exams in the Testing Center*.

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/

Course Calendar

Tentative Calendar

Examinations	Covered	Due Date	Location
Exam One	CH 2 and CH 3	Oct 14	In Class
Exam Two	Unit 3 Ch 8	Nov 11	In Class
Exam Three	Ch 11 and Ch 12	Dec 02	In Class
Final Exam	Comprehensive	Dec 11	In Class

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

No Make-Up exams are given.

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 Procedure

Students are expected to attend all classes, come on time and leave on time.
 The last day to withdraw Nov/11/2019.

Student Conduct

Insert a specific description of your expectations for student conduct. Be specific about In-Person, Hybrid, and Online classes and the consequences that will be implemented for disruptive behavior.

Instructor's Course-Specific Information (As Needed)

If you do not need this section you may delete it completely. Insert additional information on how you manage your course. For example, include your grading policy describing when students can expect grades and feedback after they submit coursework.

Electronic Devices

No electronic devices are allowed without instructor's permission.

The use of electronic devices by students in the classroom is up to the discretion of the instructor. Any use of such devices for the purposes other than student learning is strictly prohibited unless authorized as an appropriate ADA accommodation from the ADA Counselor.

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) 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 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
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

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: Instructors may find it preferable to cover the course topics in the order listed below. However, the instructor may choose to organize topics in any order, but all material must be covered.

APPROXIMATE TIME REFERENCE

(6 Hours) Unit 1: Set Theory
  2.1 Basic Set Concepts
  2.2 Subsets
  2.3 Venn Diagrams & Set Operations
  2.4 Set Operations and Venn Diagrams with Three Sets

(7 Hours) Unit 2: Logic
  3.1 Statements, Negations, and Quantified Statements
  3.2 Compound Statements and Connectives
  3.3 Truth Tables for Negation, Conjunction, and Disjunction
  3.4 Truth Tables for the Conditional and the Biconditional (Omit Biconditional)
  3.5 Equivalent Statements and Variations of Conditional Statements (Omit Variation Forms)
  3.7 Arguments and Truth Tables (Focus on truth tables and diagrams to determine validity.)

(9 Hours) Unit 3: Consumer Mathematics and Financial Management
  8.1 Percent, Sales Tax, and Discounts
  8.2 Income Tax
  8.3 Simple Interest
  8.4 Compound Interest
  8.5 Annuities, Methods of Saving, and Investments
  8.6 Cars
  8.7 The Cost of Home Ownership

(6 Hours) Unit 4: Counting Methods and Probability Theory
  11.1 The Fundamental Counting Principle
  11.2 Permutations
  11.3 Combinations
  11.4 Fundamentals of Probability

(7 Hours) Unit 5: Statistics
  12.1 Sampling, Frequency Distributions, and Graphs
  12.2 Measures of Central Tendency
  12.3 Measures of Dispersions
  12.4 The Normal Distribution

(4 Hours) Unit 6: Functions **(Optional)**
  7.1 Graphing and Functions
  7.2 Linear Functions and Their Graphs
  7.6 Modeling Data: Exponential, Logarithmic and Quadratic Functions