



Houston Community College: Central College
MATH 2412 - Precalculus

CRN: 62548 – Spring 2018, Tu/THU, 9:30AM – 12:30PM

Room: DUAL/Jones HS

Instructor	Name: Ousman Kondeh Office: NE Campus, Codwell Hall Rm 105 Email: ousman.kondeh@hccs.edu
Office Hours	T/TH: 12:30 – 1:30pm: Central College Meetings may also be scheduled by appointment at times which may be more convenient for the student
Course Description	Math 2412: Precalculus. In-depth combined study of algebra, trigonometry, and other topics for calculus readiness. Topics include elementary theory of functions and equations, analytic geometry, vectors, mathematical induction, sequences and finite series, and introduction limits.
Prerequisites	Math 1314: Pass with a “C” or better AND Math 1316: Pass with a “C” or better or Departmental approval
Textbook	Precalculus, 6th Edition, by Robert Blitzer ISBN-978-0134765488
Course Goal	This course is intended primarily to prepare students for calculus. It can also be used for general mathematics credit.
Course Student Learning Outcomes (SLO)	<ol style="list-style-type: none">1. Demonstrate and apply knowledge of properties of functions.2. Recognize and apply algebraic and transcendental functions and solve related equations.3. Apply graphing techniques to algebraic and transcendental functions.4. Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.5. Prove trigonometric identities.6. Solve right and oblique triangles.7. Evaluate limits analytically
Learning objectives	Students will: <ol style="list-style-type: none">1. Develop and use various problem-solving techniques.2. Recognize functions as ordered pairs.3. Determine the graph of an algebraic equation or function.4. Understand synthetic division.

5. Develop partial fraction decomposition.
6. Find the zeros of real functions
7. Solve polynomial equations.
8. Utilize the six basic trigonometric functions.
9. Apply the Law of sines and the Law of cosines for various types of situations.
10. Verify various trigonometric identities.
11. Find the powers and roots of complex numbers using DeMoivre's Theorem.
12. Understand basic vectors (2 dimensional).
13. Convert points in a rectangular coordinate system to polar coordinates.
14. Recognize algebraic formulas relating to circles, parabolas, ellipses, and hyperbolas.
15. Use translation of axes, rotation of axes, and polar equations of conics.
16. Recognize the use of arithmetic and geometric sequences.
17. Use summation notation to represent a series.
18. Understand and use the Binomial theorem.
19. Understand mathematical induction.
20. Understand the basic concepts of limits.

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.

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 course, like most mathematics courses, will cover a rigorous and continuous schedule in which new concepts are introduced every session. Therefore, it is essential that all students attend class regularly. If you miss a class, you are responsible for any handouts given or material covered in class during your absence. Attendance will be taken and may

be used to determine borderline grades. If you feel you have missed a class for a legitimate reason, you may submit a written explanation to your instructor.

Assessments

Three unit exams will be given. There will be no make-up exams except in cases of emergency and at the discretion of your instructor. In case of emergency, contact your instructor as soon as possible.

A cumulative final exam will be given during the final exam period.

Grading

Grades are determined based on the following scale:

Homework checks = 15%
Three Midterm Exams = 60% (20% each)
Comprehensive Final Exam = 25%

90–100%	A
80–89%	B
70–79%	C
60–69%	D
59% and below	F

+/- grades will be used for borderline situations in the final course grade.

Assignments

A. Homework problems will be assigned each class period. They are to be completed for the next class period. Homework should be done in **MymathLab (Course ID: kondelh35715)**. If done in a notebook or binder, clearly mark each section and problem number. Write down each problem and the complete solution. Be sure your work is neat and legible. A limited amount of time for questions concerning homework will be allotted, but, due to the nature and length of the problems, every answer or solution will probably not be discussed. Odd answers to exercises are given in the back of the text; Utilize help sessions and office hours to complete your homework correctly. For every hour spent in class, you should expect to spend a minimum of two hours doing homework outside of class.

B. Homework checks will be given periodically. Homework checks could cover any sections already covered in class, even if you already had a homework check on that section. In other words, go back to previous assignments to correct any errors. Homework may be checked using a variety of methods. For example, these checks may be a collection of all problems assigned where all or a sample of problems are checked for accuracy. Checks may be a measure of completion. There may also be “spot check,” where you will be asked to record your work for only a few problems. Make sure every homework problem is complete and correct.

Calculator

Scientific Calculator is required. Graphing Calculator is acceptable. No TI – 89’s on Tests. **Note:** Cell phones are not calculators and out of respect for both students and instructors, should not be out in class. If your cell phone is out or being used during any test, it will be assumed that you are cheating.

HCC Policy Statement – Students with Disabilities

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/district/students/disability-services/>

Ability Services Contact Information

Central College	713-718-6164	
Coleman College	713-718-7376	
Northeast College	713-718-8322	
Northwest College	713-718-5422	713-718-5408
Southeast College	713-718-7144	
Southwest College	713-718-5910	
Adaptive Equipment/Assistive Technology	713-718-6629	713-718-5604
Interpreting and CART services	713-718-6333	

**HCC Policy
Statement: 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
Houston, TX 77266-7517 or Institutional.Equity@hccs.edu
Phone number: 713-718-8271

**Basic Needs Security
Statement**

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. Furthermore, please notify the professor if you are comfortable in doing so. This will enable us to provide any resources that HCC may possess.

**Campus Carry
Statement**

At HCC the safety of our students, staff, and faculty is our first priority. As of August 1, 2017, Houston Community College is subject to the Campus Carry Law (SB11 2015). For more information, visit the HCC Campus Carry web page at <http://www.hccs.edu/district/departments/police/campus-carry/>.”

**HCC Policy
Statement:
Academic Honesty**

The Academic Dishonest Policy states the following are considered cheating: Providing or receiving information by showing another student answers to a quiz or test; or by telling another student information about the answers to a quiz or test. To ask other students what is on an exam before you take yours is also considered cheating. If you are caught cheating, the first time you will receive a grade of zero on that test and the department chair will be notified. A second offence will result in a zero on the test and a referral to the vice president of student personnel for disciplinary action (which could mean suspension from the college).

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.

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 mean 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.

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 April 4, 2018

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.

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

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:

The HCC Tutoring Centers provide free tutoring for individual subjects offered at specific times throughout the week on various campuses. There is no need to make an appointment. If you need a tutor, visit: www.hccs.edu/findatutor for times and locations. For more information about tutoring at HCC, visit www.hccs.edu/district/students/tutoring.

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 <https://hccs.upswing.io/>. 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.

EGLS₃ -- Evaluation for Greater Learning Student Survey System

At Houston Community College, professors believe that thoughtful student feedback is necessary to improve teaching and learning. During a designated time, you will be asked to answer a short online survey of research-based questions related to instruction. The anonymous results of the survey will be made available to your professors and division chairs for continual improvement of instruction. Look for the survey as part of the Houston Community College Student System online near the end of the term. Visit www.hccs.edu/EGLS3 for more information.

Administration contact information

College - Level Math Courses

Chair of Math	Jaime Hernandez	SW Campus	713-718-2477	Stafford, Scarcella, N108
- Admin. Assistant	Tiffany Pham	SW Campus	713-718-7770	Stafford, Scarcella, N108
- Admin. Assistant	TBA	SW Campus	713-718-2477	Stafford, Scarcella, N108
Math Assoc. Chair	Clen Vance	CE Campus	713-718-6421	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	Susan Fife	SE Campus	713-718-7241	Felix Morales Building, Rm 124
- Admin. Assistant	Carmen Vasquez	SE Campus	713-718-7056	Felix Morales Building, Rm 124
Dev. Math Assoc. Chair	Marisol Montemayor	SE Campus	713-718-7153	Felix Morales Building, Rm 124
Dev. Math Assoc. Chair	Jack Hatton	NE Campus	713-718-2434	Northline Building, Room 321

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.

Tentative Course Schedule:

Spring 2018 Precalculus				
Week	Dates	Topic	Sections	Homework
1	1/21 – 1/27	<ul style="list-style-type: none"> ▪ Factoring with negative rational exponents ▪ Difference Quotient ▪ Partial Fractions 	Addend 1 1.3 p. 180-1 7.3	
2	1/28 – 2/3	<ul style="list-style-type: none"> ▪ Trigonometry ▪ Analytic Trigonometry ▪ Analytic Trigonometry ▪ The Law of Sines & Cosines 	4.2, 4.5 – 4.7 5.1 – 5.3 5.4, 5.5 6.1, 6.2	See MymathLab
3	2/4 – 2/10	<ul style="list-style-type: none"> ▪ Polar Coordinates ▪ Graphs of Polar Equations ▪ Complex numbers in Polar Form; DeMoivre's Theorem 	6.3 6.4 6.5	See MymathLab
4	2/11 – 2/17	<ul style="list-style-type: none"> ▪ Vectors ▪ The Dot Product 	6.6 6.7	See MymathLab
5	2/18 – 2/24	<ul style="list-style-type: none"> ▪ The Ellipse, The Hyperbola 	9.1, 9.2	Exam 1, Tuesday
6	2/25 – 3/3	<ul style="list-style-type: none"> ▪ The Parabola, Rotation of Axes 	9.3, 9.4	See MymathLab
7	3/4 – 3/10	<ul style="list-style-type: none"> ▪ Parametric Equations ▪ Conic Sections in Polar Coordinates 	9.5 9.6	
8	3/11 – 3/17	Spring Break – Holiday		
8	3/18 – 3/24	<ul style="list-style-type: none"> ▪ Sequences and Summ. Notation ▪ Arithmetic Sequences 	10.1 10.2	See MymathLab
9	3/25 – 3/31	<ul style="list-style-type: none"> ▪ Geometric Sequences ▪ Mathematical Induction 	10.3 10.4	See MymathLab
10	4/1 – 4/7	<ul style="list-style-type: none"> ▪ The Binomial Theorem 	10.5	See MymathLab
11	4/8 – 4/14	<ul style="list-style-type: none"> ▪ Finding Limits – Tables & Graphs 	11.1	Exam 2, Tuesday
12	4/15 – 4/20	<ul style="list-style-type: none"> ▪ Limits: Properties of Limits ▪ Limits and Continuity 	11.2 11.3	See MymathLab
13	4/22 – 4/27	<ul style="list-style-type: none"> ▪ Introduction to Derivative 	11.4	See MymathLab
14	4/29 – 5/5	Review		Exams 3, Tuesday
15	5/6 – 5/11	Review		
16	5/13 – 5/18	Cumulative Final		Tuesday, May 8