

# Plane Trigonometry-14446

## MATH-1316

S1 2022 Section 476 3 Credits 06/06/2022 to 07/10/2022 Modified 05/20/2022

## Course Meetings

#### **Course Modality**

Face to face

**Meeting Days** 

Monday thru Friday

### **Meeting Times**

10:00 AM-11:45 AM

### **Meeting Location**

Spring Branch Campus Rm 321

## Welcome and Instructor Information

### Instructor: Mr. Phil Unruh

Email: phil.unruh@hccs.edu Phone: 7137185874

## What's Exciting About This Course

Trigonometry is a branch of mathematics that studies relationships between the sides and angles of triangles. This course is designed to provide the skills necessary to succeed in Precalculus and Calculus.

### **My Personal Welcome**

Welcome to Trigonometry—I'm delighted that you have chosen this course! One of my passions is to know as much as I can about trig, 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. My goal is for you to walk out of the course with a better understanding of trig. So please visit me or contact me by email whenever you have a question.

## **Preferred Method of Contact**

I prefer that you contact me at my HCC email through Canvas. If you email me from outside of the Canvas email then please include your name, class name, and class time.

phil.unruh@hccs.edu

#### **Office Hours**

12:00-1:00 PM Spring Branch Room AD6

Monday thru Friday or by appointment.

## Course Overview

### **Course Description**

MATH 1316 - Plane Trigonometry Credits: 3 (3 lecture). This course is intended for students whose curriculum requires trigonometry as a prerequisite for higher mathematics courses or as a first course in trigonometry or as a review course. Topics include solutions of triangles, Euler identity, graphing of trigonometric and inverse trigonometric functions, identities, trigonometric equations and an introduction to vector analysis. Core Curriculum Course.

### Prerequisites

Math 1314; must be placed into college-level mathematics. A grade of C or better in Math 1314 or its equivalent. (Plane Geometry is recommended).

### **Department Website**

https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/mathematics/

# Ore 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.

## III Student Learning Outcomes and Objectives

## 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 1316, the student will be able to:

- 1. Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.
- 2. Graph trigonometric functions and their transformations.
- 3. Prove trigonometric identities.
- 4. Solve trigonometric equations.

- 5. Solve right and oblique triangles.
- 6. Use the concepts of trigonometry to solve applications.

## **Learning Objectives**

Upon completion of MATH 1316, the student will be able to:

- 1. Recognize the graphs of the six basic trigonometric functions.
- 2. Know the amplitude, period, and phase shift for sine and cosine functions.
- 3. Sketch functions exhibiting the above properties.
- 4. Solve problems dealing with vectors.
- 5. Recognize polar graphs.
- 6. Solve right triangles.
- 7. Convert degrees to radians and vice-versa.
- 8. Solve problems dealing with the application of radian measures.
- 9. Solve problems relating to linear and angular velocities.
- 10. Recognize identities including sum and difference angle formula, double angle formula, and half angle formulas.
- 11. Prove trigonometric identities using the formulas given above.
- 12. Solve trigonometric equations and inverse trigonometric equations.
- 13. Solve triangles using the sine and cosine laws.
- 14. Find areas of triangles.
- 15. Recognize the six basic trigonometric functions and understand the relationships between them.
- 16. Evaluate the trigonometric functions of special angles.
- 17. Find reference or related angles and coterminal angles.
- 18. Use a calculator or a table (not on exams) to find trigonometric function values of any angle.
- 19. Rewrite a complex number in polar form.
- 20. Use DeMoivre's Theorem to simplify a complex number raised to a whole number exponent.
- 21. Find the nth root of a complex number.

## Departmental Practices and Procedures

The Mathematics Department has specific expectations for calculators, proctored exams and grading policies. Refer to the Course Requirements and Devices sections below.

## Instructional Materials and Resources

#### **Instructional Materials**

The <u>HCC Online Bookstore (https://hccs.bncollege.com/shop/hccs-central/page/find-textbooks</u>) provides searchable information on textbooks for all courses. Check with your instructor before purchasing textbooks because the book might be included in your course fees.

- The textbook listed below is *required* for this course.
- Trigonometry, 12th edition;
- Print ISBN: 9780135924136, 0135924138
- e-text ISBN: 9780135924792, 0135924790

By Margaret L. Lial, John Hornsby, David I. Schneider, Callie J. Daniel.

It is included in a package that contains the text as well as an access code and are found at the <u>HCC Bookstore</u>. 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 MyMathLab and the online eBook, go to Canvas and register by clicking on MyLab and Mastering in the Dashboard.

#### **Other Instructional Resources**

#### Courseware

MyMathLab and the online eBook will be used for homework and quizzes.

#### Trigonometry

Author: Margaret L. Lial, John Hornsby, David I. Schneider, Callie J. Daniel Publisher: Pearson Edition: 12th

#### Edition: 12th

## Course Requirements

#### Assignments, Exams, and Activities

Туре	Weight	Торіс	Notes
Homework	25%		There will be a MyMathLab assignment for each section that we cover.
Exams/Quizzes	50%		There will be 4 in class chapter exams. I will drop the lowest score.
Final Exam	25%		Comprehensive final exam held in class on Thursday, July 7, 2022.
Extra Credit			Describe the assignment here.

#### **Grading Formula**

Grade	Range	Notes
Α	90 - 100	
В	80 - 89	
С	70 - 79	
D	60 - 69	
F	< 60%	

## Instructor's Practices and Procedures

#### **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.

## Missed Assignments/Make-Up Policy

No make-up exams will be given for any reason. One of the four major test grades (the lowest grade) will be dropped.

### **Academic Integrity**

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

https://www.hccs.edu/studentprocedures (https://www.hccs.edu/studentprocedures)

#### **Attendance Procedures**

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. If a student is absent from class it still remains the student's responsibility to secure the notes from one of the other members of the class and to submit any required assignments. The last day to withdraw June 27, 2022.

### **Student Conduct**

Students should not engage in disruptive activities while in the classroom or online. Any conduct that is deemed unprofessional to the academic atmosphere, such as cell phone use or consistent talking during instructional delivery, will not be tolerated. Any student found guilty of such conduct will be asked to leave the classroom.

### Instructor's Course-Specific Information

This course is designed to give STEM majors a good foundation in Trigonometry. You should plan on doing homework each night. Homework has very specific due dates.

#### Devices

A scientific calculator will be required for certain content of this course to successfully complete the homework and test reviews. An understanding of calculus is imperative for engineering, science, and mathematics disciplines. The material in this course will be supported by the use of a graphing calculator and appropriate mathematical software. No symbolic calculators will be allowed on exams. These include, but are not limited to, TI-89, TI-92, HP-48, TI-CAS, CE, CX. No cell phones or equivalent will be used during exams.

All personal communication devices (any device with communication capabilities including but not limited to cell phones, blackberries, pagers, cameras, palmtop computers, laptops, 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.

### **Faculty Statement about 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.

## Faculty-Specific Information Regarding Canvas

This course section will use Canvas (<u>https://eagleonline.hccs.edu (https://eagleonline.hccs.edu)</u>) to supplement in-class assignments, exams, and activities.

HCCS Open Lab locations may be used to access the Internet and Canvas. For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

### **Social Justice Statement**

Houston Community College is committed to furthering the cause of social justice in our community and beyond. HCC does not discriminate on the basis of race, color, religion, sex, gender identity and expression, national origin, age, disability, sexual orientation, or veteran status. I fully support that commitment and, as such, will work to maintain a positive learning environment based upon open communication, mutual respect, and non-discrimination. In this course, we share in the creation and maintenance of a positive and safe learning environment. Part of this process includes acknowledging and embracing the differences among us in order to establish and reinforce that each one of us matters. I appreciate your suggestions about how to best maintain this environment of respect. If you experience any type of description, please contact me and/or the Office of Institutional Equity at 713-718-8271.

## 竝 HCC Policies and Information

### **HCC Grading System**

HCC uses the following standard grading system:

Grade	Grade Interpretation	Grade Points
А	Excellent (90-100)	4
В	Good (80-89)	3
С	Fair (70-79)	2
D	Passing (60-69), except in developmental courses.	1
F	Failing (59 and below)	0
FX	Failing due to non-attendance	0
w	Withdrawn	0
I	Incomplete	0
AUD	Audit	0

Grade	Grade Interpretation	Grade Points
IP	In Progress. Given only in certain developmental courses. A student must re-enroll to receive credit.	0
СОМ	Completed. Given in non-credit and continuing education courses.	0

### Link to Policies in Catalog and Student Handbook

Here's the link to the HCC Catalog and Student Handbook: https://catalog.hccs.edu/ (https://catalog.hccs.edu/)

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

#### Link to HCC Academic Integrity Statement

https://www.hccs.edu/student-conduct (https://www.hccs.edu/student-conduct) (scroll down to subsections)

### **Campus Carry Link**

Here's the link to the HCC information about Campus Carry:

https://www.hccs.edu/campuscarry (https://www.hccs.edu/campuscarry)

### **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 (https://www.hccs.edu/email) and activate it now. You may also use Canvas Inbox to communicate.

## Office of Institutional Equity

Use the following link to access the HCC Office of Institutional Equity, Inclusion, and Engagement: <u>https://www.hccs.edu/eeo</u> (<u>https://www.hccs.edu/eeo</u>)

#### **Ability 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 <u>https://www.hccs.edu/accessibility (https://www.hccs.edu/accessibility)</u>

#### Title IX

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or genderbased 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)

https://www.hccs.edu/titleix (https://www.hccs.edu/titleix)

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

#### **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.

### **Canvas Learning Management System**

Canvas is HCC's Learning Management System (LMS), and can be accessed at the following URL:

https://eagleonline.hccs.edu (https://eagleonline.hccs.edu)

HCCS Open Lab locations may be used to access the Internet and Canvas. For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

#### **HCC Online Information and Policies**

Here is the link to information about HCC Online classes, which includes access to the required Online Information Class Preview for all fully online classes: <u>https://www.hccs.edu/online/ (https://www.hccs.edu/online/)</u>

#### 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. <u>https://eagleonline.hccs.edu/ (https://eagleonline.hccs.edu/)</u>

#### 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 during office hours, and 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 <u>HCCS Student Handbook</u> (<u>https://www.hccs.edu/studenthandbook</u>)

### EGLS3

The EGLS<sup>3</sup> (Evaluation for Greater Learning Student Survey System (https://www.hccs.edu/egls3)) 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. EGLS<sup>3</sup> surveys are only available for the Fall and Spring semesters. -EGLS3 surveys are not offered during the Summer semester due to logistical constraints.

https://www.hccs.edu/egls3 (https://www.hccs.edu/egls3)

## 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.

### **Student Resources**

#### Tutoring

HCC provides free and convenient academic support, in a large variety of subjects, to HCC students in both an online environment and in-person on campus. Tutoring is provided by HCC personnel in order to ensure that it is appropriate. Visit the HCC Tutoring Services website for more information at <a href="https://https//https://https://https://https://https://https/

#### 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 <a href="https://library.hccs.edu">https://library.hccs.edu</a> (https://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 <a href="https://www.hccs.edu/supplemental-instruction">https://www.hccs.edu/supplemental-instruction</a> (https://www.hccs.edu/supplemental-instruction)

#### **Resources for Students:**

https://www.hccs.edu/covid19students (https://www.hccs.edu/covid19students)

#### **Basic Needs Resources:**

https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/ (https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/)

#### **Student Basic Needs Application:**

https://www.hccs.edu/basicneeds (https://www.hccs.edu/basicneeds)

#### COVID-19

Here's the link to the HCC information about COVID-19:

https://www.hccs.edu/covid-19 (https://www.hccs.edu/covid-19)

### Sensitive or Mature Course Content

In this college-level course, we may occasionally discuss sensitive or mature content. All members of the classroom environment, from your instructor to your fellow students, are expected to handle potentially controversial subjects with respect and consideration for one another's varied experiences and values.

### Instructional Modalities

#### In-Person (P)

Safe, face-to-face course with scheduled dates and times

#### Online on a Schedule (WS)

Fully online course with virtual meetings at scheduled dates and times

#### Online Anytime (WW)

Traditional online course without scheduled meetings

#### Hybrid (H)

Course that meets safely 50% face-to-face and 50% virtually

#### Hybrid Lab (HL)

Lab class that meets safely 50% face-to-face and 50% virtually

### **Copyright Statement**

In order to uphold the integrity of the academic environment and protect and foster a cohesive learning environment for all, HCC prohibits unauthorized use of course materials. Materials shared in this course are based on my professional knowledge and experience and are presented in an educational context for the students in the course. Authorized use of course materials is limited to personal study or educational uses. Material should not be shared, distributed, or sold outside the course without permission. Students are also explicitly forbidden in all circumstances from plagiarizing or appropriating course materials. This includes but is not limited to publically posting quizzes, essays, or other materials. This prohibition extends not only during this course, but after. Sharing of the materials in any context will be a violation of the HCC Student Code of Conduct and may subject the student to discipline, as well as any applicable civil or criminal liability. Consequences for unauthorized sharing, plagiarizing, or other methods of academic dishonesty may range from a 0 on the specified assignment and/or up to expulsion from Houston Community College. Questions about this policy may be directed to me or to the Manager of Student Conduct and Academic Integrity.

## 喆 Course Calendar

### **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.

Tentative Instructional Outline:

Approx. Day	Reading Assignment	Reference	
6	1.1 Angles	CHAPTER 1	
6	1.2 Angle relationships and Similar Triangles(omit)		
6	1.3 Trigonometric Functions		
7	1.4 Using the Definitions of the Trigonometric Functions		
7	2.1 Trigonometric Functions of Acute Angles	CHAPTER 2	
7	2.2 Trigonometric Functions of Non-Acute Angles		
8	2.3 Finding Trigonometric Function values Using a Calculator		
8	2.4 Solving Right Triangles		
8	2.5 Further Applications of Right Triangles.		
9	Review and Test 1 June 9		
10	3.1 Radian Measure	Chapter 3	
10	3.2 Applications of Radian Measure		

13	3.3 The Unit Circle and Circular Functions	
13	3.4 Linear and Angular Speed .	
14	4.1 Graphs of the Sine and Cosine Functions	Chapter 4
14	4.2 Translations of the Graphs of the Sine and Cosine Functions	
15	4.3 Graphs of the Tangent and Cotangent Functions	
15	4.4 Graphs of the Secant and Cosecant Functions	
16	Review and Test 2 June 16	
17	5.1 Fundamental Identities	CHAPTER 5
17	5.2 Verifying Trigonometric Identities	
17	5.3 Sum and Difference Identities for Cosine	
21	5.4 Sum and Difference Identities for Sine and Tangent	
21	5.5 Double-Angle Identities	
21	5.6 Half-Angle Identities	
22	6.1 Inverse Circular Functions	CHAPTER 6
22	6.2 Trigonometric Equations I	
23	6.3 Trigonometric Equations II	
23	6.4 Equations Involving Inverse Trigonometric Functions	
24	Review and Test 3 June 24	
27	7.1 Oblique Triangles and the Law of Sines	CHAPTER 7
27	7.2 The Ambiguous Case of the Law of Sines	
27	7.3 The Law of Cosines	
28	7.4 Vectors, Operations, and the Dot Product	
28	7.5 Applications of Vectors.	

29	8.2 Trigonometric (Polar) Form of Complex Numbers	CHAPTER 8
29	8.3 The Product and Quotient Theorems	
30	8.4 DeMoivre's Theorem; Powers and Roots	
30	8.5 Polar equations and Graphs	
1	Review and Test 4 July 1	
5	Review for Final	
7	FINAL EXAM July 7, 10:00-11:50 AM	

## **E** Additional Information

### **Departmental/Program Information**

Program Information for Majors: https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/mathematics/

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

#### Process for Expressing Concerns about the Course

If you have concerns about any aspect of this course, please reach out to your instructor for assistance first. If your instructor is not able to assist you, then you may wish to contact the Department Chair.

#### **Mathematics Courses**

Chair of Math	Mahmoud Basharat	SW Campus	713-718-2438	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	Susan Fife	NW Campus	713-718-7241	Katy Campus Building, Rm 112
Math Assoc. Chair	Hien Nguyen	NE Campus	713-718-2440	Northline, Rm 324

#### **Developmental Mathematics Courses**

Chair of Dev. Math	Dorothy A. Muhammad	SE Campus	713-718-5846	Felix Morales Building, Rm 124
- Admin. Assistant	Carmen Vasquez	SE Campus	713-718-7056	Felix Morales Building, Rm 124
Dev. Math Assoc. Chair	Jack Hatton	SE Campus	713-718-2434	Felix Morales Building, Rm 124
Dev. Math Assoc. Chair	Adnan Ulhaque	SW Campus	713-718-5463	Felix Morales Building, Rm 124/ Stafford Scarcella, N108

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