Mathematics
Northeast College – Pinemont Center
Math 1316: Plane Trigonometry
CRN 58897 – Spring 2018
Room 164| 9:30 – 10:50 | Mon and Wed
3 hour lecture course / 48 hours per semester/16 weeks
Textbook: Trigonometry, 11th edition by Margaret L. Lial, John Hornsby, David I. Schneider, Callie J. Daniel.
ISBN-13: 978-0134307008

Instructor: Hien Nguyen
Instructor Contact Information: Email (preferred): Hient.Nguyen@hccs.edu -------Phone: 713-718-2440
Learning Web: http://learning.hccs.edu/faculty/hient.nguyen/math1314 (where to download class syllabus)

Office location and hours: B112 Pinemont: 9:30 a.m. – 12:00 p.m. on Thursday
                                                 B112 Pinemont: 7:30 a.m. – 8:00 a.m. on Monday – Thursday or by appointment

Type of Instruction: in person
Class Cancellation: The department secretary will call the students in case of cancellation

Important Days:
Jan 16th: Class begins
Jan 31st: Last day to withdraw without a grade (official record day)
Feb 19th: President's Day
Mar 11- 18th: Spring Break
Apr 03rd: Last day to withdraw with W grade
May 07th: Final Exam @ 9 a.m.

Homework, Quizzes, and E-book Website:
Homework and quizzes are assigned on www.mymathlab.com and e-book is also viewable on this site. **The
hardcopy of the text book is optional, but the access code for homework, quizzes, and e-book is
required.**

MyMathLab CourseID: **nguyen87781**
Note: You must use your **real name** to register for MyMathLab. Do not use your nick name or middle name. If you fail
to do so, you might not get your homework grade. If you have your name changed during the semester, please notify
me.

Course Description
MATH 1316 Plane Trigonometry. In-depth study and applications of trigonometry including definitions, identities, inverse
functions, solutions of equations, graphing, and solving triangles. Additional topics such as vectors, polar coordinates and
parametric equations may be included.

Prerequisites
A grade of C or better in MATH 1314 or the equivalent. (Plane geometry is recommended).

Course Goal
This course is intended for students whose curriculum requires trigonometry as a prerequisite for higher mathematics courses. It
may also be taken as a first course in trigonometry or as a review course. Students whose curricula are generally non-technical in
nature may take this course as a mathematics elective if the necessary algebraic and geometric prerequisites have been met. The
transferability of this course as either mathematics credit or elective credit is at the discretion of the school to which the student
intends to transfer.

Course Student Learning Outcomes (SLO):
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.

Objectives:

Students will:

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

Core Objectives

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.

Course Outline:

Section Numbers

Chapter 1   Trigonometric Functions
     1.1 Angles
     1.3 Trigonometric Functions
     1.4 Using the Definitions of the Trigonometric Functions

8.5 Polar Equations and Graphs

Comprehensive Final Examination   *2 hours*

"Tentative" Course Calendar

Week	Chapter	Section / Topic	Homework Due Date
1	1	Orientation: Syllabus and MyMathLab Registration & sec 1.1	Jan 21st
2	1, 2	Section: 1.3, 1.4, and 2.1	Jan 28th
3	2	Section: 2.2, 2.3, and 2.4	Feb 4th
4	2	Section: 2.5, 3.1 and Exam 1 Review	Feb 11th
5	3	Section 3.2 and Exam 1(Chapter 1 & 2)	Feb 18th
6	3	Section: 3.3, 3.4, and 4.1	Feb 25th
7	4	Section: 4.2, 4.3, and 4.4	Mar 4th
8	4, 5	Section 5.1, 5.2 and Exam 2 Review	Mar 11th
		Spring Break !!!	
9	5	Section 5.3 and Exam 2 (Chapter 3 & 4)	Mar 25th
10	5	Section: 5.4, 5.5, and 5.6	Apr 1st
11	6	Section: 6.1, 6.2, and 6.3 and Exam 3 Review	Apr 8th
12	6	Section: 6.4, 7.1 and Exam 3 (Chapter 5 & 6)	Apr 15th
13	7	Section: 7.2, 7.3, and 7.4	Apr 22nd
14	7	Section: 7.5, 8.2, 8.3	Apr 29th
15	8	Section: 8.4, 8.5 & Exam 4 (Chapter 7 & 8)	May 6th
16	1 – 8	Final Review & Final Exam	May 7th

Instructional Methods

This is an in-person class. There are two meetings per week. Lectures will be given in a traditional method using markers and whiteboard or smartboard with projection. You are expected to prepare for each class meeting by reading the sections to be covered and watching the section videos in MyMathLab before coming to class.

Student Assignments

Homework policy:

Math 1316 has an online Homework that must be done from the Web Site (www.mymathlab.com) by all students. This homework can be done from your home computer, the Learning Center computers on Campus, or the computers in the Open Lab; you can even load it on your office computer with permission, and maybe on your smart phone. To register into the homework for my section, use The CourseID: **nguyen87781**. The online homework counts 20% of the course grade. **This homework is not optional**. There is a deadline for completion for each exercise set. You are supposed to complete them before each exam date. Be sure you are aware of these dates; they will affect your homework grade.

Quiz policy:

Chapter Quizzes are also assigned online on MyMathLab website. Quiz average counts 5% of the final course grade.

Testing policy:
There are four major exams and a comprehensive final exam. The worse major exam will be dropped. Each major exam will count 16% of the course grade.

Major Exam Format:
Each major exam will have two sets of questions: free-response (5 – 10) questions and multiple-choice (15 – 20) questions. For free-response questions, you must show all your work to support your final answer and partial credits are awarded.

Make-up policy:
There is no make-up exam in this class. If you miss one exam, it will be dropped. If you miss the second exam, it will be zero.

Final Examination:
The final examination is comprehensive and consists of 33 multiple-choice problems. The problems cover all the material required in the course. Final exam worth 27% of the final course grade. **Per department policy, everyone MUST take the final exam**.

Calculator policy:
A scientific calculator is allowed during the class. Graphing calculators must have the graphing tool disabled.

Grading policy:
Final Average = **20% (HW) + 5% (Quiz) + 48%(Best 3 of 4 Exams) + 27% (Final)**

Grading Average:
Your final course grade is based on the following standard HCCS scale.
A = 100 – 90 ....4 points per semester hour
B = 89 – 80 ....3 points per semester hour
C = 79 – 70 ....2 points per semester hour
D = 69 – 60………………..............1 point per semester hour
F = 59 and below ....0 points per semester hour
W(Withdrawn)..............................0 points per semester hour
I (Incomplete) ....0 points per semester hour
AUD (Audit) ....0 points per semester hour

To compute grade point average (GPA), divide the total grade points by the total number of semester hours attempted. The grades "AUD" and "I" do not affect GPA.

Note: The grade of "FX" is given when a student fails due to lack of attendance. A grade of "W" may be given on or before the official withdrawal date but not at the time of final grade submission.

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

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/."

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.

HCC Policy Statement: Academic Honesty

You can collaborate on your homework. You can form study groups to work on your homework and your exam reviews. However, any collaboration on in-class exams will be considered as cheating and if you do not turn your cell phone off and put it out of sight, you may be considered as cheating.
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.

<u>Cheating</u> 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.

<u>Plagiarism</u> means the appropriation of another's work and the unacknowledged incorporation of that work in one's own written work offered for credit.

<u>Collusion</u> 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 didn't attend the class and register for MyMathLab by Jan 31ˢᵗ, you will be dropped from the class.**

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, <u>you are responsible for all material missed.</u> 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 04/03/2018.**

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.

Classroom Behavior
Students should not engage in disruptive activities while in the classroom. Any conduct that is deemed to distract the academic atmosphere, such as cell phone use or consistently talking during instructional delivery, will not be tolerated. Any student found guilty of such conduct will be asked to leave the classroom until further notice. **Your cell phone must be off and out of sight during class, if you get caught using your cell phone in class you will be asked to leave and be marked absent.**

Misuse of Electronic Devices in the Classroom
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.

Instructor Requirements
This is a in person class. We will meet 100% in person. You are expected to do the following:
1. Go to class every class day on time. (if you 10 or 15 minutes late, you miss a lot important information.)
2. Register for MyMathLab so you can read the sections and watch the section videos to be covered for each class.
3. Log in Canvas to read more lecture notes and to watch extra lecture videos of the sections to be covered before each class.
4. Sign in MyMathLab to do your homework and quizzes.
5. Using Canvas Email for communication. Any urgent messages will be also posted in Canvas.
Note: If you failed to attend the class and failed to register for MyMathLab by Jan 31st, you may be dropped from the course.

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.

Some Additional Thoughts and Suggestions

- I strongly recommend that you do all the MyMathLab homework on paper, and then enter your answers into the website. Keep a notebook with all your homework notes in it. It is extremely important especially for trigonometry class.

- In general, in college you are expected to spend at least 3 hours doing work outside of class for each hour that you are in class. Thus, since our class is 3 hours per week, **you should expect to spend at least 9 hours doing work outside of class per week for this course in order to do well in this class**.

- Studying is all about efficiency; using your time optimally in order to learn the material as completely as possible. To do this, you will need to know and what you don't know. Once you understand which parts of the material you do know and don't know, you will need to

focus on what you don't know until you eventually know it. This means spending a lot of time with material that you don't know which can feel uncomfortable. **This is the secret to studying mathematics: becoming more comfortable with being uncomfortable. We need to spend time on topics we don't yet understand in order to understand them.**

- I highly encourage you to talk with your peers and with me about mathematics. It can be fun and useful to discuss mathematics from different vantage points. But don't let someone's beautiful explanation of a homework problem trick you into thinking that you know how to do that problem. Until you can come up with that beautiful explanation on your own, you don't yet know it and thus must continue to learn that topic.

- Technology can be an extremely useful tool. It can help you to gain an intuition for the material, it can help you to check your work, and it can make the material more fun. But again, don't let technology trick you into thinking you understand something that you don't. It's your responsibility to use technology as a tool to help you gain understanding and not as a crutch to aid you in avoiding understanding.

Tips for Becoming a Successful College Student:
1. Come to class.
2. Read your book.
3. Do your homework.
4. Listen and ask questions.
5. Contribute to classroom discussions.
6. Use any tutoring resources that are available.
7. Interact with your teachers, either face to face or using the phone or email.
8. Form study groups with your classmates.
9. Meet with your advisor.
10. Get involved in campus activities.
11. Share new ideas with your friends and family.

NOTE: THIS SYLLABUS IS SUBJECT TO CHANGE AS NEEDED TO MEET THE OBJECTIVES OF THE COURSE OR TO AID IN COURSE ADMINISTRATION AT THE DISCRETION OF INSTRUCTOR. IT IS NOT ANTICIPATED THAT THERE WILL BE ANY SUBSTANTIVE CHANGES.

☻*Let's have a wonderful semester!!!*☻