COURSE SYLLABUS
HCC
SOUTHEAST COLLEGE
DEPARTMENT OF MATHEMATICS

MATH 1316: College Trigonometry

Spring 2015 / 45088 / MW 5:30PM-7:00PM / SE, #304

INSTRUCTOR: Tawfik Haj

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Textbook: Trigonometry Alternate Eighth Edition by Ron Larson.

Course Description

MATH 1316 Plane Trigonometry. Topics include solutions of triangles, Euler identity, graphing of trigonometric and inverse trigonometric functions, identities, trigonometric equations, applications including DeMoivre's Theorem, and an introduction to vector analysis.

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. Examine and interpret the graphs of basic trigonometric functions, vectors, and polar plots, and their transformations.
2. Apply standard trigonometric identities to simplify expressions and to solve trigonometric equations and applications.
3. Determine the exact value and approximation of basic trigonometric functions.
4. Rewrite complex numbers in polar form and apply arithmetic operations using both polar and standard forms of complex numbers.

Learning outcomes

Students will:

1.1 Recognize the graphs of the six basic trigonometric functions.
1.2 Know the amplitude, period, and phase shift for sine and cosine functions.
1.3 Sketch functions exhibiting the above properties.
1.4 Solve problems dealing with vectors.
1.5 Recognize polar graphs.
2.1 Solve right triangles.
2.2 Convert degrees to radians and vice-versa.
2.3 Solve problems dealing with the application of radian measures.
2.4 Solve problems relating to linear and angular velocities.
2.5 Recognize the various identities including sum and difference angle formula, double angle formula, and half angle formulas.
2.6 Prove trigonometric identities using the formulas given above.

2.7 Solve trigonometric equations and inverse trigonometric equations.
2.8 Solve triangles using the sine and cosine laws.
2.9 Find areas of triangles.
3.1 Recognize the six basic trigonometric functions and understand the relationships between them.
3.2 Evaluate the trigonometric functions of special angles.
3.3 Find reference or related angles and coterminal angles.
3.4 Use a calculator or a table (not on exams) to find trigonometric function values of any angle.
4.1 Rewrite a complex number in polar form.
4.2 Use DeMoivre's Theorem to simplify a complex number raised to a whole number exponent.
4.3 Find the nth root of a complex number.

CALENDAR

HW due date	*Chapters Covered on Test*	*Test Date*
HW #1-2/4/15 HW #2-2/25/15	1.1, 1.2, 1.3, 1.4,1.8 2.1, 2.2, 2.4, 2.5	**Test #1-2/9/15** **Test #2- 3/2/15**
HW #3-3/24/15 HW #4-4/15/2015	1.5,1.6,1.7, 2.3,2.4,2.5 3.1, 3.2	**Test #3-3/30/15** **Test #4-4/20/15**
HW #5-4/29/15	3.1, 3.2,3.3,3.4,4.1, 4.2, 4.3, 4.4	**Test #5-5/4/15**
Final Exam	Chapters 1 - 4	5/11/2015 5:30-7:30PM

Instructional Methods

. It should be noted that enrollment in this course does not guarantee advancement to the next course level. The final responsibility for learning lies with the student. The final class average will be determined by the following guidelines:

Student Assignments

5 Major Exams	**50%, NO MAKE-UP EXAMS(will drop lowest grade)**
HW assignments	**20%, LATE HW WILL NOT BE ACCEPTED**
Final Exam	**30%,**

HCC Policy Statement - ADA

Services to Students with Disabilities

Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the Disability Services Office at his or her respective college at the beginning of each semester. Faculty members are authorized to provide only the accommodations requested by the Disability Support Services Office. Persons needing accommodations due to a documented disability should contact the ADA counselor for their college as soon as possible. For questions, please contact Donna Price at 713.718.5165. To visit the ADA Web site, please visit www.hccs.edu then click Future students, scroll down the page and click on the words Disability Information.

SE campus: 713 718 7910

HCC Policy Statement: Academic Honesty

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 3/24/2015, 4:30PM

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 detrimental to 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.

Use of Camera and/or Recording Devices
As a student active in the learning community of this course, it is your responsibility to be respectful of the learning atmosphere in your classroom. To show respect of your fellow students and instructor, you will turn off your phone and other electronic devices, and will not use these devices in the classroom unless you receive permission from the instructor.

Use of recording devices, including camera phones and tape recorders, is prohibited in classrooms, laboratories, faculty offices, and other locations where instruction, tutoring, or testing occurs. Students with disabilities who need to use a recording device as a reasonable accommodation should contact the Office for Students with Disabilities for information regarding reasonable accommodations

Instructor Requirements

A. READING: Reading at the college level means the ability to analyze and interpret a variety of printed materials;
B. WRITING: Competency/outcome in writing is the ability to produce clear, correct, and coherent prose adapted to purpose, occasion, and audience;
C. SPEAKING: Competence in speaking is the ability to communicate orally in clear, coherent, and persuasive language appropriate to purpose, occasion, and audience;
D. LISTENING: Listening at the college level means the ability to analyze and interpret various forms of spoken communication;
E. CRITICAL THINKING: Critical thinking embraces methods for applying both qualitative and quantitative skills analytically and creatively to subject matter in order to evaluate arguments and to construct alternative strategies.

Grading Scale
90 - 100 = A
80 - 89 = B
70 - 79 = C

60 - 69 = D
Below 60 = F

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:

Free tutoring is available in room # 203. 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 www.hccs.askonline.net. 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.

Course Schedule:

Chapters and Sections

Chapter 1 Angles and Trigonometric Functions

1.1, 1.2, 1.3, 1.4,1.7,1.8

Chapter 2 Analytic Trigonometry

2.1, 2.2, 2.4, 2.5

Unit 3

1.5,1.6, 2.3

Chapter 3 Applications of Trigonometry

3.1, 3.2, 3.3, 3.4

Chapter 4

4.1, 4.2, 4.3, 4.4