MAC 1114C - 0001 College Trigonometry

Department of Mathematics, College of Sciences

UNIVERSITY OF CENTRAL FLORIDA

Course Syllabus

Term FALL 2021

Instructor:	David Guinovart Sanjuan	**Lectures Hours:**	Mo/We 7:30AM - 8:50AM
Office Hours:	Mo/Tu/We/Th from 11:00am to 12:30pm via Zoom (information in WebCourses)	**Room for lectures:**	CB1 O121
Phone:	407-823-6284 (Main Mathematics Office)	**Lab Hours:**	Fr 12:00PM - 1:20PM
Digital Contact:	The primary contact method is **Webcourses**. You may also contact me via email: Guinovart@ucf.edu	**Lab location (MALL):**	MSB 240/241/242

Please note: All times mentioned in this syllabus are Eastern Standard Time or Eastern Daylight Time, as applicable. (Orlando, FL time).

MALL has open hours where any student may enter to get help, open hours are Monday-Thursday 16:00-18:00.

Course Materials and Resources:

1. **MyLabsMath (MLM) Access Code for Precalculus Fourth Edition** by **Sullivan and Sullivan**. Access code to be purchased through the First Day Program or the University Bookstore only. (Please note: First Day Program will be cheapest price available!)

2. **Regular notebook** (spiral-bound, binder) to keep neat and organized notes.

3. Suggested but not required a TI30xa calculator as that is the only calculator that will be allowed on tests. (Note that this calculator is provided on test days.)

4. 4 bluebook/greenbooks to be supplied by the student on test days. (No bluebook/greenbook no admittance to testing)

5. UCF ID is required for admittance to testing.

Course Modality: This course is modality P which is face to face. The student is expected to attend class on Monday and Wednesday in CB1-121. There is also a lab section that meet on Friday in MSB 240/241/242.

Catalog Description: The circle arc length, identities, trigonometric functions, inverse functions, applications to simple harmonic motion, function of angles, complete development of triangle solving. Prepares students for upper-level mathematics.

Course Objectives: The course will familiarize students with the main concepts and techniques of trigonometry. It includes the unit circle, trigonometry functions and identities, applications of the trigonometry and triangle solving techniques.

Learning Objectives:

After the completion of this course, without learning aids of any type including formulas or fact sheets, students will be able to

1. Describe the angle measurements by using radians and degrees.
2. Evaluate the exact values of the six trigonometric functions or estimate them for the given angles with or without a scientific calculator.
3. Describe and apply the properties of the six trigonometric functions and their transformations to solve the application problems.
4. Describe the properties of the six inverse trigonometric functions.
5. Evaluate the six inverse trigonometric functions.
6. Solve trigonometric equations and their application problems in a rectangular coordinate system or in a polar coordinate system.

Office Hours: Office hours are noted above. Office hours are going to be Mo/Tu/We/Th from 11:00 am to 12:30 pm and as otherwise announced, or by appointment. The Zoom link to access them is posted on a page in the first module in WebCourses, discussion section, and announcements. You will access these by clicking on "Zoom" in the navigation menu in WebCourses. If necessary, changes to office hours will be announced in class and/or posted on WebCourses. It is anticipated that all office hours this semester will be conducted on Zoom.

MyLab Math (MLM) Access Code:

To purchase the MLM access code for about $63.00, you must go to the "Course Materials" link in your MAC1140 Webcourse, choose "Opt-In", and then click 'CONFIRM'. You may do this through August 27th, 2021, 23:59, and the fee will be charged to your student account. If

you neglect to do this by August 27th, 2021, or you choose "Opt-Out", then **you will have to contact the UCF campus bookstore and pay $93.30 to continue to access MyLab Math.** If you have any questions, please contact the UCF campus bookstore manager.

We will access MyLab Math through Webcourses using a single sign-on feature.

First Day Program for MyLab Math

To enhance your learning experience and provide affordable access to the right course material, this course is part of an inclusive access model called First Day™. You can easily access the required materials for this course at a discounted price, and benefit from single sign-on access with no codes required in UCF Webcourses.

- All students enrolled in the course automatically have access to the MyLab Math digital textbook until at least January 14. You have until Friday, August 27th at 23:59 to select the "Opt-In" option. You can select the opt-in option by first clicking on the tab that says Course Materials.
    - If you select and confirm "Opt-In" by August 27th at 23:59, then your cost for the semester is about **$63.00.** It is highly recommended that you do this now!
    - If you do not select and confirm "Opt-In" before August 27th at 23:59, then your cost for the semester is **$93.30.**

If you do not opt-in by the deadline, your MyLab Math access will be terminated within 2 business days after the deadline. If you wish to continue your MyLab Math access but did not opt-in, you may purchase access through the UCF bookstore at the opt-out Price. Access will be restored within 1-2 business days of your purchase.

Please note: To opt-in you need to click on the Course Materials tab, check "Opt-In", then click confirm.

Note: Chrome is the recommended web browser for Webcourses and MyLab Math. If you are using an Apple product and/or Safari, there is some likelihood that you will have technical difficulties accessing MyLab Math. If you are having trouble accessing MyLab Math, first try clearing your browser cookies/history/cache. If this doesn't work, try completely powering down your computer and restarting. Try using either Chrome or Firefox. If you are still having issues, please navigate to https://support.pearson.com/getsupport to contact technical support.

Third-Party Accessibility and Privacy Statements

This course uses MyLabs Math, an online learning platform published by Pearson Education, Inc.

- Digital Learning Services Privacy Notice: https://login.pearson.com/v1/piapi/policies/static/html/NA/PearsonPrivacyPolicy_en_US.html?cc=US&lang=en_US
- Accessibility: https://www.pearson.com/us/accessibility.html

ZOOM

To familiarize yourself with Zoom, visit https://cdl.ucf.edu/support/webcourses/zoom/ . You may choose to use Zoom on your mobile device (phone or tablet).

Things to Know About Zoom:

- You must sign in to our Zoom session using your UCF NID and password.
- Improper classroom behavior is not tolerated within Zoom sessions and may result in a referral to the Office of Student Conduct.
- You can contact Webcourses@UCF Support at https://cdl.ucf.edu/support/webcourses if you have any technical issues accessing Zoom.

Course Activities

Online homework: There will be graded online homework assignments in MyLab Math. Assignments will generally open on a Monday and be available until Friday due at 11:59pm. Because UCF allows late registration in this course until Friday at 23:59. The first week's assignments of homework and quiz will be open until Wednesday of week 2. This fact does not preclude the opening of week 2 assignments while week 1 is still open. Do not schedule your workload by due dates.

Each homework can be worked as long as it is open. It is expected that students will take multiple sessions to finish each assignment, working through Help Me Solve It and taking notes as you go.

All assignments will have posted due dates and these due dates will not be extended, so please plan accordingly. Personal computer issues, login errors, internet connectivity, adding the class late, travel plans, and computer connectivity or performance issues of any kind will NOT warrant an extension. If you are experiencing issues, you are encouraged to contact the 24/7 technical support service at 1-888-561-9110.

Only the lowest homework (1) grade will be dropped.

First Week Academic Activity (Syllabus Quiz) will be counted as a quiz. The quiz will be available in Webcourses during the first week. As of Fall 2014, all faculty members are required to document students' academic activity at the beginning of each course. In order to document that you began this course, please complete the following academic activity by the end of the first week of classes, REQUIRED ACADEMIC ACTIVITY quiz in Webcourses no later Friday, the first week of class by 23:59. Failure to do so may result in a delay in the disbursement of your financial aid.

Quizzes: There will be a MALL Quiz that must be performed in the MALL. On test week that quiz will be done at home.

Each quiz must be finished in one session. You have at least 2 attempts on each MyLab Math quiz and one attempt on each in-class quiz.

Only the lowest quiz (1) grade will be dropped.

Tests: Three in-class midterm tests are scheduled as follows:

- Test 1: Friday September 17 during your normal MALL lab hour
- Test 2: Friday October 15 during your normal MALL lab hour
- Test 3: Friday November 19 during your normal MALL lab hour

These test dates and coverage are subject to change depending on external factors. Any changes to the scheduled days/times and coverage will be announced at least one week prior to each test, or as soon as practicable. The lowest test score will be dropped.

Final Exam: Final is December 6-10 student will sign up for a test reservation that best fits with the student's schedule. Reservation site TBD.

Students must take the Final Exam at the date/time scheduled; no exceptions will be granted.

The Final Exam is cumulative and required of all students. Students not taking the final exam will be awarded a grade of "F" for the course.

Testing Requirements

Test Policy and MALL Procedures

- The use of any algebra solving app, algebra solving calculator or algebra solving software is cheating and the student will be sent to student conduct for cheating and possibility given an F for the course.
- After taking the test and during the remaining time of that test dissemination of the contents of the test by any means is unauthorized assistance and is a violation of the UCF code and the student will be sent to student conduct and given an F for the course.
- **Greenbooks:** Each student must bring a blank greenbook to the lab the days of the exams. Students will not be permitted to take a test without a greenbook. Four greenbooks are required this semester.
- **UCF ID** is required for admittance to testing.

Make-up Exams and Assignments

Make-up policy: Should you miss an activity or exam because of your participation in official University-sponsored activities (e.g., intercollegiate athletics), religious observances (see restrictions below), legal obligations (such as jury duty), military obligations, serious illness (e.g., hospitalization) or serious family emergencies (e.g., death in the immediate family), you may make up the assignment. You must however provide valid and complete documentation preferably in advance and anyway WITHIN ONE WEEK FROM THE MISSED ASSIGNMENT. **The test must also be made up within one week of the test date**. Otherwise, a grade of zero for the

missed exam will be factored into your course average. It is at your professor's discretion to determine whether the reason why you missed an exam grants a make-up exam.

Personal travel plans are **not** valid reasons for taking tests at a different date/time than scheduled.

Note: If a student receives a grade of zero on an exam as a result of academic misconduct, he/she will not be allowed to make up that exam.

Grading

By default, there will be no curves and no extra credit activities. Your course grade will solely depend on your performance in the graded assessments listed in this syllabus.

Course weights will be assigned according to the following:

Assignment	Percentage of Grade
MALL	15%
Online Homework	10%
Tests (1,2,3)	Best 2 50%
Final Exam	25%
Total	100%

- The lowest homework grades will be dropped.
- The lowest quiz grade will be dropped.
- The lowest test grade will be dropped.
- The final exam is required. Students not taking the final exam will earn an F for the class.

Final course grades will be assigned according to the following scale.

Letter Grade	Points
A	90-100%
B	80-89%
C	70-79%
NC**	40-69%
F	0-39%

** note all test may be comprehensive because math builds on prior concepts. Please note that I use standard mathematical rounding.
This course is a NC course. Please see http://fyae.sdes.ucf.edu/faq * for complete details for NC policy.

Please note that this scale does not use "minus" or "plus" grades.

Consult the latest Undergraduate catalog for regulations and procedures regarding grading such as Incomplete grades, grade changes, and grade forgiveness.

University Services and Resources

Academic Services and Resources

A list of available academic support and learning services is available at UCF Student Services. Click on "Academic Support and Learning Services" on the right-hand side to filter.

Non-Academic Services and Resources

A list of non-academic support and services is also available at UCF Student Services. Click on "Support" on the right-hand side to filter.

If you are a UCF Online student, please consult the UCF Online Student Guidelines for more information about your access to non-academic services.

Student Academic Activity Requirement: All faculty members are required to document students' academic activity and engagement at the beginning of each course. In order to document that you began this course, you will need to complete an activity in Webcourses@UCF no later than **Friday, August 27, 2021**. Failure to do so will result in a delay in the disbursement of your financial aid. The information relative to the activity will be posted in WebCourses and announced via email.

Syllabus Updates: The right is reserved to update this syllabus by making reasonable corrections or to accommodate external factors (for example, scheduling issues caused by hurricane closures). Updates will be communicated as soon as practicable.

Communication: All official class communications will be sent to the Knights email addresses, or through WebCourses. Students are responsible for checking their Knights email accounts and WebCourses regularly and for the information contained in their instructors' emails. Students should contact faculty exclusively via Knights email or via the WebCourses email; **emails sent from a different email will not be answered**. See www.knightsemail.ucf.edu and webcourses.ucf.edu for further information. All communication between student and instructor and between student and student should be respectful and professional. Make sure the emails you send contain your name, your section number, and a subject related to the topic about which you are writing. **To make it easier for me to track your questions, please always write them in a brand new email instead of replying to an email sent by me with an unrelated inquiry.**

Academic Integrity

Students should familiarize themselves with UCF's Rules of Conduct. According to Section 1, "Academic Misconduct," students are prohibited from engaging in:

- *Unauthorized assistance*: Using or attempting to use unauthorized materials, information or study aids in any academic exercise unless specifically authorized by the instructor of

record. The unauthorized possession of examination or course-related material also constitutes cheating.

- *Communication to another through written, visual, electronic, or oral means*: The presentation of material which has not been studied or learned, but rather was obtained through someone else's efforts and used as part of an examination, course assignment, or project.
- *Commercial Use of Academic Material*: Selling of course material to another person, student, and/or uploading course material to a third-party vendor without authorization or without the express written permission of the university and the instructor. Course materials include but are not limited to class notes, Instructor's PowerPoints, course syllabi, tests, quizzes, labs, instruction sheets, homework, study guides, handouts, etc.
- *Falsifying or misrepresenting* the student's own academic work.
- *Plagiarism*: Using or appropriating another's work without any indication of the source, thereby attempting to convey the impression that such work is the student's own.
- *Multiple Submissions*: Submitting the same academic work for credit more than once without the express written permission of the instructor.
- *Helping another violate* academic behavior standards.

For more information about Academic Integrity, students may consult The Center for Academic Integrity.

For more information about plagiarism and misuse of sources, see "Defining and Avoiding Plagiarism: The WPA Statement on Best Practices".

Responses to Academic Dishonesty, Plagiarism, or Cheating

Students should also familiarize themselves with the procedures for academic misconduct in UCF's student handbook, The Golden Rule. UCF faculty members have a responsibility for students' education and the value of a UCF degree, and so seek to prevent unethical behavior and when necessary respond to academic misconduct. Penalties can include a failing grade in an assignment or in the course, suspension or expulsion from the university, and/or a "Z Designation" on a student's official transcript indicating academic dishonesty, where the final grade for this course will be preceded by the letter Z. For more information about the Z Designation, see http://goldenrule.sdes.ucf.edu/zgrade.

Course Accessibility Statement

The University of Central Florida is committed to providing access and inclusion for all persons with disabilities. This syllabus is available in alternate formats upon request. Students with disabilities who need specific access in this course, such as accommodations, should contact the professor as soon as possible to discuss various access options. Students should also connect with Student Accessibility Services (Ferrell Commons, 7F, Room 185, sas@ucf.edu, phone (407) 823-2371). Through Student Accessibility Services, a Course Accessibility Letter may be created and

sent to professors, which informs faculty of potential access and accommodations that might be reasonable.

Websites: There are many websites claiming to offer study aids to students, but in using such websites, students could find themselves in violation of academic conduct guidelines. These websites include (but are not limited to) Quizlet, Course Hero, Chegg, and BartlebyLearn. UCF does not endorse the use of these products in an unethical manner, which could lead to a violation of our University's Rules of Conduct. These sites encourage students to upload course materials, such as test questions, individual assignments, and examples of graded material. Such materials are the intellectual property of instructors, the university, or publishers and may not be distributed without prior authorization. Additionally, uploading quiz or exam questions to one of these websites while in the process of taking that quiz or exam, whether they receive a solution or not, constitutes seeking unauthorized assistance during an assessment. Students who engage in such activities could be found in violation of academic conduct standards and could face course and/or University penalties. Please let me know if you are uncertain about the use of a website so I can determine its legitimacy. **Just the posting of this material is a violation of the Rules of Conduct rule (1C), "Commercial Use of Academic Material", regardless of your intent.**

Third parties: Third parties may attempt to connect with you to sell your notes and other course information from this class. Distributing course materials to a third party without my authorization is a violation of our University's Rules of Conduct. Please be aware that such class materials that may have already been given to such third parties may contain errors, which could affect your performance or grade. Recommendations for success in this course include coming to class on a routine basis, visiting me during my office hours, and making use of the Student Academic Resource Center (SARC), the University Writing Center (UWC), the Math Success Center, etc. If a third party should contact you regarding such an offer, I would appreciate your bringing this to my attention. We all play a part in creating a course climate of integrity. Use these materials at your own risk.

Unauthorized Use of Technology for Graded Work: When taking a test or a quiz in a classroom setting, would you ask the student sitting next to you for an answer to a quiz or test question? The answer should be no. This applies to graded homework, quizzes, tests, etc. in any setting. Just because you are not in a formal classroom setting being proctored while taking a quiz or test does not mean that the completion of graded work in an online course should not be treated with integrity.

Students are not allowed to use GroupMe, WhatsApp, or any other form of technology to exchange course material associated with a graded assignment, quiz, test, etc. while that assignment is open in Webcourses.

The following is a not all-inclusive list of technology uses that are considered academic misconduct and could result in the same penalties as cheating in a face-to-face class:

- Taking a screenshot of an online quiz or test question, posting it to GroupMe or WhatsApp or a similar app, or sending it in a text, and asking for assistance;

- Answering an online quiz or test question posted to GroupMe or Whatsapp or a similar app;
- Giving advice, assistance, or suggestions on how to complete a question associated with an online assignment, quiz, or test.
- The use of outside assistance from another student or by searching the Internet, Googling for answers, use of websites such as Quizlet, Course Hero, Chegg Study, etc.;
- Gathering with others to take an online quiz or test together and share answers in the process.

If a student or group of students are found to be exchanging material associated with a graded assignment, quiz, or test through any form of technology (GroupMe, WhatsApp, etc.), or use outside assistance (Googling answers, use of websites such as Quizlet, Course Hero, Chegg Study, etc.), they could receive anywhere from a zero grade on the assignment to an "F" in the course depending on the act. Students in these cases will also be reported to the Office of Student Conduct for academic misconduct.

Religious Observances: It is the practice of the University of Central Florida to reasonably accommodate the religious observances, practices, and beliefs of individuals in regard to admissions, class attendance, and the scheduling of exams and work assignments. A student who desires to observe a religious holiday of his or her religious faith and to be allowed to make up work due on those days must notify his/her professor **in writing by the end of Friday, September 3rd, 2021**. (Please note: documentation may be requested.)

Deployed Active Duty Military Students: Students who are deployed active duty military and/or National Guard personnel and require accommodation should contact their professors as soon as possible after the semester begins and/or after they receive notification of deployment to make related arrangements.

Campus Safety Statement for Students in Online-Only Courses: Emergencies on campus are rare, but if one should arise during class, everyone needs to work together. Students should be aware of their surroundings and familiar with some basic safety and security concepts.

- In case of an emergency, dial 911 for assistance.
- Every UCF classroom contains an emergency procedure guide posted on a wall near the door. Students should make a note of the guide's physical location and review the online version at http://emergency.ucf.edu/emergency_guide.html.
- Students should know the evacuation routes from each of their classrooms and have a plan for finding safety in case of an emergency.
- If there is a medical emergency during class, students may need to access a first-aid kit or AED (Automated External Defibrillator). To learn where those are located, see the AED Locations Page.
- To stay informed about emergency situations, students can sign up to receive UCF text alerts by going to https://my.ucf.edu and logging in. Click on "Student Self Service" located on the left side of the screen in the toolbar, scroll down to the blue "Personal

Information" heading on the Student Center screen, click on "UCF Alert", fill out the information, including e-mail address, cell phone number, and cell phone provider, click "Apply" to save the changes, and then click "OK."

- Students with special needs related to emergency situations should speak with their instructors outside of class.
- To learn about how to manage an active-shooter situation on campus or elsewhere, consider viewing this video You CAN Survive an Active Shooter

COVID-19 and Illness Notification: Students who believe they may have a COVID-19 diagnosis should contact UCF Student Health Services (407-823-2509) so proper contact tracing procedures can take place.

Students should not come to campus if they are ill, are experiencing any symptoms of COVID-19, have tested positive for COVID, or if anyone living in their residence has tested positive or is sick with COVID-19 symptoms. CDC guidance for COVID-19 symptoms is located here: (https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html)

Students should contact their instructor(s) as soon as possible if they miss class for any illness reason to discuss reasonable adjustments that might need to be made. When possible, students should contact their instructor(s) before missing class. (Please note: documentation may be requested.)

In Case of Faculty Illness: If the instructor falls ill during the semester, there may be changes to this course, including having a backup instructor take over the course. Please look for announcements or mail in Webcourses@UCF or Knights email for any alterations to this course.

Copyright This course may contain copyright protected materials such as audio or video clips, images, text materials, etc. These items are being used with regard to the Fair Use doctrine in order to enhance the learning environment. Please do not copy, duplicate, download or distribute these items. The use of these materials is strictly reserved for this online classroom environment and your use only. All copyright materials are credited to the copyright holder.

UCF's First Day Program: MAS-3105 is participating in UCF's First Day Program. This means that as a student, you have easy electronic access through the modules tab to the Lay Linear Algebra book and MyLab Math through Webcourses (Canvas) at a discounted rate.

Before the drop-add deadline, it is important that you complete 2 steps.

1. Sign into webcourses, locate the course materials button and opt in. The digital fee for the course material will be posted to your student account.
2. Make sure you click on Modules and click on any one of the links (MyLabMath Course Home, MyLab E-text) the first time you click on the link you will be prompted to accept the user agreement, once accepted your account will be established.
3. If you miss the opt-in period and decide to purchase access after the deadline you must contact the UCF bookstore (407) 823-2665 or 1-844-9-EBOOKS (1-844-932-6657)

Chapter 5: Trigonometric Functions

5.1 Angles and Their Measures
Convert between Decimals and Degrees, Minutes, Seconds Measures for Angles. Find the Arc Length of a Circle. Convert from Degrees to Radians and from Radian to Degrees.

5.2 Right Triangle Trigonometry
Find the Values of Trigonometric Functions of Acute Angles. Use the Fundamental Identities. Find the Values of the Remaining Trigonometric Functions, Given the Value of One of Them. Use the Complementary Angle Theorem.

5.3 Computing the Values of Trigonometric Functions of Acute Angles
Find the Exact Values of the Trigonometric Functions of Common Angles. Use a Calculator to Approximate the Values of the Trigonometric Functions of Acute Angles. Model and Solve Applied Problem Involving Right Triangles.

5.4 Trigonometric Functions of Any Angle
Find the Exact Values of the Trigonometric Functions for Any Angle. Use Coterminal Angles to Find the Exact Value of a Trigonometric Function. Determine the Signs of the Trigonometric Functions of an Angle in a Given Quadrant. Find the Reference Angle of an Angle. Use a Reference Angle to Find the Exact Value of a Trigonometric Function. Find the Exact Values of Trigonometric Functions of an Angle, Given Information about the Functions.

5.5 Unit Circle Approach: Properties of the Trigonometric Functions
Find the Exact Values of the Trigonometric Functions Using the Unit Circle. Know the Domain and Range of the Trigonometric Functions. Use the Periodic Properties to Find the Exact Values of the Trigonometric Functions. Use Even-Odd Properties to Find the Exact Values of the Trigonometric Functions.

5.6 Graphs of the Sine and Cosine Functions
Graph Functions of the Form $y=A\sin(\omega x)+B$ Using Transformations. Graph Functions of the Form $y=A\cos(\omega x)+B$ Using Transformations. Determine the Amplitude and Period of Sinusoidal Functions. Graph Sinusoidal Functions Using Key Points. Find an Equation for a Sinusoidal Graph.

5.7 Graphs of the Tangent, Cotangent, Cosecant, and Secant Functions
Graph Functions of the Form $y=A\tan(\omega x)+B$ and $y=A\,cot(\omega x)+B$. Graph Functions of the Form $y=A\csc(\omega x)+B$ and $y=A\,sec(\omega x)+B$

5.8 Phase Shift
Graph Sinusoidal Functions of the Form $y=A\sin(\omega x-\phi)+B$

Chapter 6: Analytical Trigonometry

6.1 The Inverse Sine, Cosine, and Tangent Functions

Find the Exact Value of an Inverse Sine Function. Find an Approximate Value of an Inverse Sine Function. Use Properties of Inverse functions to Find Exact Values of Certain Composite Functions. Find the Inverse Function of a Trigonometric Function.

6.2 The Inverse Trigonometric Functions (Continued)
Find the Exact Value of Expressions Involving the Inverse Sine, Cosine, and Tangent Functions. Define the Inverse Secant, Cosecant, and Cotangent Functions. Use a Calculator to Evaluate $\sec^{-1} x$, $\csc^{-1} x$, and $\cot^{-1} x$. Write a Trigonometric Expression as an Algebraic Expression.

6.3 Trigonometric Equations
Solve Equations Involving a Single Trigonometric Function. Solve Trigonometric Equations Using a Calculator. Solve Trigonometric Equations Quadratic in Form. Solve Trigonometric Equations Using Fundamental Identities.

6.4 Trigonometric Identities
Use Algebra to Simplify Trigonometric Expressions. Establish Identities.

6.5 Sum and Difference Formulas
Use Sum and Difference Formulas to Find Exact Values.
Use Sum and Difference Formulas to Establish Identities.

6.6 Double-angle and Half-angle Formulas
Use Double-angle Formulas to Find Exact Values. Use Double-angle Formulas to Establish Identities. Use Half-angle Formulas to Find Exact Values.

6.7 (Not Tested) Product-to-Sum and Sum-to-Product Formulas
Express Products as Sums. Express Sums as Products.

Chapter 7: Applications of Trigonometric Functions

7.1 Applications Involving Right Triangles
Solve Right Triangles. Solve Applied Problems.

7.2 The Law of Sines
Solve SAA or ASA Triangles. Solve SSA Triangles. Solve Applied Problems.

7.3 The Law of Cosines
Solve SAS Triangles. Solve SSS Triangles. Solved Applied Problems.

7.4 Simple Harmonic Motion
Build a Model for an Object in Simple Harmonic Motion. Analyze Simple Harmonic Motion.

Chapter 8: Polar Coordinates; Vectors

8.1 Polar Coordinates

Plot Points Using Polar Coordinates. Convert from Polar Coordinates to Rectangular Coordinates. Convert from Rectangular Coordinates to Polar Coordinates. Transform Equations between Polar and Rectangular Form.

8.2 Polar Equations and Graphs
Identify and Graph Polar Equations by Converting to Rectangular Equations. Test Polar Equations for Symmetry. Graph Polar Equations by Plotting Points.

8.4 Vectors
Graph Vectors. Find a Position Vector. Add and Subtract Vectors Algebraically. Find a Scalar Multiple and the Magnitude of a Vector. Find a Unit Vector. Find a Vector from Its Direction and Magnitude.

9.7 Plane Curves and Parametric Equations
Graph Parametric Equations. Find a Rectangular Equation for a Curve Defined Parametrically. Use Time as a Parameter in Parametric Equations. Find Parametric Equations for Curves Defined by Rectangular Equations.

Note: This syllabus may be partially modified.

You will be notified of any changes in class and via WebCourses announcements.