



Note to Instructor: Replace the placeholder text beneath the headings with the appropriate information for your course. Please note that all sections, with the exception of "Other Course Information," are required elements.

### Basic Course Information

Semester:	SPRING 2021	Instructor Name:	ERIC LEHTONEN
Course Title & #:	MATH 140 TRIGONOMETRY	Email:	<a href="mailto:eric.lehtonen@imperial.edu">eric.lehtonen@imperial.edu</a>
CRN #:	20130	Webpage (optional):	
Classroom:	N/A	Office #:	2763
Class Dates:	2/17/2021-6/9/2021	Office Hours:	TR 10:00-11:00 AM
Class Days:	TR	Office Phone #:	(760)355-6522
Class Times:	9:40-11:05	Emergency Contact:	(619)517-3742
Units:	3	Class Format:	SYNCHRONOUS

### Course Description

[Paste in the course description from the Course Outline of Record (COR), located at <https://imperial.curricunet.com/Search>]or)

### COURSE/CATALOG DESCRIPTION

The study of trigonometric functions, their inverses and their graphs, trigonometric identities and proofs related to trigonometric expressions, trigonometric equations, solving right triangles, solving triangles using Law of Cosines and the Law of Sines, and polar coordinates. (CSU)

### Course Prerequisite(s) and/or Corequisite(s)

[Paste in the course prerequisite(s) and/or corequisite(s) from the COR, located at <https://imperial.curricunet.com/Search>]

#### A. PREREQUISITES, if any:

Appropriate placement as defined by AB705 or,  
MATH 098 or  
MATH 091 with at grade of "C" or better.



## Student Learning Outcomes

[Paste in the course student learning outcomes from the COR, located at <https://imperial.curricunet.com/Search>]

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

Demonstrate problem solving strategies by identifying an appropriate method to solve a given problem, correctly set up the problem, perform the appropriate analysis and computation, and share their interpretation of the conclusion or the outcome, using correct grammar or in an oral presentation. This outcome will be assessed through selected exercises on exams throughout the semester. (ILO1, ILO2)

## Course Objectives

[Paste in the course objectives from the COR, located at <https://imperial.curricunet.com/Search>]

### MEASURABLE COURSE OBJECTIVES AND MINIMUM STANDARDS FOR GRADE OF "C":

Upon satisfactory completion of the course, students will be able to:

- 1 Define the six trigonometric functions using right triangle, the coordinate system and unit circle definitions.
- 2 Evaluate the trigonometric function of an angle in degree and radian measure
- 3 Manipulate and simplify trigonometric expressions.
- 4 Graph trigonometric functions, including those involving vertical and horizontal translations.
- 5 Evaluate and graph inverse trigonometric functions.
- 6 Solve triangles using the Law of Sines and Law of Cosines, including ambiguous cases.
- 7 Verify trigonometric identities, including sum and difference formulas, half-angle and power-reducing formulas and prove trigonometric identities.
- 8 Solve trigonometric equations, triangles and applications.
- 9 Graph polar equations.
- 10 Convert between polar and rectangular coordinates and equations.
- 11 Calculate powers and roots of complex numbers using DeMoivre's Theorem
- 12 Represent a vector in the form  $\langle a, b \rangle$  and  $a\mathbf{i} + b\mathbf{j}$
- 13 Solve application problems.



## Textbooks & Other Resources or Links

*[Describe which textbooks and/or other resources are required for the course. Be sure to include ISBN.]*

Lial, Hornsby, Schneider, Daniels 2016. *Trigonometry* 11th. Pearson ISBN: 978-0134217437.

## Course Requirements and Instructional Methods

*[Describe course activities, assignments, tests, homework, etc.]*

*There will be zoom meetings at the listed class time, for every class.*

## Course Grading Based on Course Objectives

*[Provide detailed information related to grading practices and grading scale, including values and totals. Consider adding final grade calculation, rubrics, late assignment policy, and other grading practices.]*

Tests - 60%. There will be 4 tests. The dates will be included in the class schedule.

Final - 30%. There will be a **comprehensive final exam**.

Quizzes - 10%. There will be frequent quizzes.

## Course Policies

*[Describe other policies such as attendance, academic honesty, netiquette, expected classroom behavior, etc.]*

A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See [General Catalog](#) for details.

Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.

Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.



## Other Course Information

*[Optionally, include other necessary information.]*

## IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit <http://www.imperial.edu/studentresources> or click the heart icon in Canvas.

## Anticipated Class Schedule/Calendar

*[Provide a tentative overview of the readings, assignments, tests, and/or other activities for the duration of the course. A table format as in the example below may be used for this purpose.]*

Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
WEEK 1 FEB 16	Syllabus & Introduction 1.1,1.2	
WEEK 2 FEB 23, 25	1.3,1.4 2.1,2.2	
Week 3 MAR 2, 4	2.3 2.4	
WEEK 4 MAR 9, 11	REVIEW TEST 1 MARCH 11TH	
WEEK 5 MAR 16, 18	3.1, 3.2 3.3	
WEEK 6 MAR 23, 25	3.4 4.1,4.2	
WEEK 7 MAR 30, APR 1	4.2,4.3 4.4	
WEEK 8	SPRING BREAK	
WEEK 9 APR 13, 15	REVIEW TEST 2 APRIL 15	
WEEK 10 APR 20, 22	5.1 5.2	
WEEK 11 APR 27, 29	5.3 5.4,5.5	
WEEK 12 MAY 4, 6	6.1,6.2 6.3,6.4	
WEEK 13 MAY 11, 13	REVIEW TEST 3 MAY 13	
WEEK 14 MAY 18, 20	7.1 7.2	



Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
WEEK 15 MAY 25,27	7.3 REVIEW	
WEEK 16 JUN 1,3	TEST 4 REVIEW	
WEEK 17 JUN 8,10	REVIEW FINAL EXAM JUNE 10	

**\*\*\*Subject to change without prior notice\*\*\***