



Basic Course Information

Semester:	Summer 2025	Instructor Name:	Humberto Pena
Course Title & #:	Trigonometry (Math 140)	Email:	Humberto.pena@imperial.edu
CRN #:	30059	Webpage (optional):	N/A
Classroom:	2728	Office #:	N/A
Class Dates:	Jun 16 – Jul 24	Office Hours:	N/A
Class Days:	Monday - Thursday	Office Phone #:	N/A
Class Times:	12:30pm – 02:45pm	Emergency Contact:	Email
Units:	3	Class Format/Modality:	In person

Course 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)

PREREQUISITES: - Successful completion of Intermediate Algebra or appropriate placement as defined by AB705.

Student Learning Outcomes

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

1. 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.

Course Objectives

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 $a_i + b_j$
13. Solve application problems.

Textbooks & Other Resources or Links

Author(s): Lial, Margaret | Hornsby, John | Schneider, David | Daniels, Callie Trigonometry 12th Edition ISBN-13: 9780135924181

We'll be using MyLab & Mastering Pearson Lab for homework assignments and quizzes. This is a necessary component of the class. Instructions on how to register for the course will be shown on the first day of class. You can also check the instructions under the 'Files' tab in Canvas. Your Pearson subscription will include a digital copy of your textbook, so it is not required to buy the textbook.

Calculator: It IS REQUIRED that you bring a scientific calculator to class. It will help you perform calculations in your homework, quizzes, and Exams.

Course Requirements and Instructional Methods

The classroom: Classroom time will consist of lecture and select practice exercises. I highly encourage you to participate in class and ask questions, no matter how trivial it seems. The course will follow a particular pace to make sure we cover everything in class, but I am more than willing to slow down and re-explain or re-do an example if asked to. All three exams and the final will be taken in person and will be graded no later than two weeks after the exam has been completed.

Outside the classroom: You will be expected to complete your homework and quizzes online outside of class time. It is your responsibility to check the due dates for homework and quizzes. You will also be expected to study accordingly for your exams. If you feel like you could use some extra help, I invite you to attend my office hours via zoom on Fridays OR go to the tutoring services offered by Imperial Valley College.

Course Grading Based on Course Objectives

The overall course will consist of 10 homework assignments, 10 Quizzes, three exams, and one final exam, which will be weighted as follows:

Homework	20%
Quizzes	10%
Exams	45% (3 exams, 15% each)
Final Exam	25%

Once everything has been graded, the grade distribution will be as follows:

100% - 90%	A
89% - 80%	B
79% - 70%	C



69% - 60%	D
59% - 0%	F

If for some reason you find yourself unable to complete a quiz or homework assignment by the due date, please contact me ASAP so that we may discuss the situation on an individual basis.

Academic Honesty (Artificial Intelligence -AI)

IVC values critical thinking and communication skills and considers academic integrity essential to learning. Using AI tools as a replacement for your own thinking, writing, or quantitative reasoning goes against both our mission and academic honesty policy and will be considered academic dishonesty, or plagiarism unless you have been instructed to do so by your instructor. In case of any uncertainty regarding the ethical use of AI tools, students are encouraged to reach out to their instructors for clarification.

Course Policies

Attendance: All students are expected to attend every class session. Incidentally, you must attend the first meeting of the course. For those who are enrolled but not present on the first day of class, as per the college's policy, will be dropped from the class. Constant absences are also grounds for dropping you from the course. If you have an emergency, please email me or let me know somehow to take it into consideration. **Long story short, come to class!**

Academic honesty: You are expected to show your own work in both homework, quizzes, and exams. Cheating is not tolerated by Imperial Valley College under any circumstance. Anyone caught cheating will receive a zero on the assignment/exam and will be reported to the Campus Disciplinary Officer who may file an incident report. Multiple instances of cheating will result in a failing grade (F) and/or disciplinary action. Please refer to the General Catalog for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to, the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment; (e) using a commercial term paper service. **Another long story short, don't cheat!**

Classroom behavior: You are expected to respect everyone around you, including your professor(s), fellow peers, and the classroom environment. Instances of disruptive behavior will result in me asking you to leave the classroom for the day. Multiple instances will result in filing a report with the Campus Disciplinary Officer.

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

	Topic	Important Dates
Week 1 August 12 - 16	Syllabus, Chapter 1, Chapter 2	
Week 2 August 19 - 23	Chapter 2, Chapter 3, Exam 1	Exam 1 on 06/26



	Topic	Important Dates
Week 3 Aug 26 - 30	Chapter 4, Chapter 5	
Week 4 Sep 02 - 06	Chapter 5, Chapter 6, Exam 2, Chapter 7	Exam 2 on 07/09
Week 5 Sep 09 - 13	Chapter 7, Chapter 8	
Week 6 Sep 16 - 20	Exam 3, Review, Final Exam	Exam 3 on 07/21 Final Exam on 07/24