

Basic Course Information

Semester	Summer 2015	Instructor's Name	David Rosas
Course Title & #	Math 140	Instructor's Email	David.rosas@imperial.edu
CRN #	30079	Webpage (optional)	None
Room	2723	Office (PT Faculty:809)	809
Class Dates	06/24 to 06/26(first week) 06/29 to 07/30	Office Hours (n/a for PT Faculty)	NA
Class Days	WRF(first week only) MTWR	Office Phone # (PT may use dept. number)	760-355-6155
Class Times	10:00 to 12:10	Who students should contact if emergency or other absence	E-mail me or call Ofelia Medina 760-355-6155 (Math Department Secretary)
Units	3.0		

Course Description

Right angle trigonometry and applications, unit circle trigonometry, graphs of trigonometric functions, inverse trigonometric functions, trigonometric identities, solving triangles using the Laws of Sines and Cosines, and polar coordinates.

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. Verify trigonometric identities (ILO2)
2. Solve a triangle given two sides and the angle in between. (ILO2)
3. Show understanding in solving trigonometric equations. (ILO2)

Course Objectives

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

1. Define the six trigonometric functions using right triangle and unit circle definitions.
2. Express angles in degrees and radians.
3. Graph trigonometric functions, including those involving vertical and horizontal translations.
4. Solve triangles using the Law of Sines and Law of Cosines, including ambiguous cases.
5. Verify trigonometric identities, including sum and difference formulas, half-angle and power-reducing formulas.
6. Define and graph inverse trigonometric functions.
7. Solve trigonometric equations.
8. Graph polar and equations.
9. Solve application problems.

Textbooks & Other Resources or Links

Lial, Hornsby, Schneider (2012). *Trigonometry* (10th/e). Boston: MA Pearson/ PH. ISBN: 978-0321671776

Course Requirements and Instructional Methods

1. **Material needed:** Textbook: *Trigonometry* 10th edition, by Lial, Hornsby, Schneider (2012), paper, pen, pencil, and scientific calculator.

Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement.

Course Grading Based on Course Objectives

Exams: There will be three exams during the semester and a final exam on the last day.

Test 1: Chapters 1-3 (20% of your grade)

Test 2: Chapters 4-5 (20% of your grade)

Test 3: Chapters 6-7 (20% of your grade)

Final Exam: Chapters 1-8 (20% of your grade)

Homework: There will be an assignment on every section of the chapter. (10% of your grade) **NO LATE HOMEWORKS WILL BE ACCEPTED.**

If you are absent, you will receive a zero on in-class assignments given towards the end of the hour (QUIZZES). **MAKE SURE YOUR NAME IS LEGIBLE ON THE QUIZ TO GET CREDIT.** (10% of your grade)

Attendance

Required language

- 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** (How many absences? _____). 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.
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Classroom Etiquette

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class unless otherwise directed by the instructor.
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the General Catalog.
- Children in the classroom: Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.

Academic Honesty

- **Plagiarism** is to take and present as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to correctly 'cite a source', you must ask for help.
- **Cheating** is defined as fraud, deceit, or dishonesty in an academic assignment or using or attempting to use materials, or assisting others in using materials, or assisting others in using materials, which are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the General School 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) use of a commercial term paper service

Additional Help – Discretionary Section and Language

- **Blackboard support center:** <http://bbcrm.edusupportcenter.com/ics/support/default.asp?deptID=8543>
- **Learning Labs:** There are several 'labs' on campus to assist you through the use of computers, tutors, or a combination. Please consult your college map for the **Math Lab**, Reading & Writing Lab, and Learning Services (library). Please speak to the instructor about labs unique to your specific program
- **Library Services:** There is more to our library than just books. **You have access to tutors in the learning center, study rooms for small groups, and online access to a wealth of resources.**
- **Forming Study Groups:** You are encouraged to form study groups. It is the best way to master the material.

Disabled Student Programs and Services (DSPS)

Required Language: Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible. If you feel you need to be evaluated for educational accommodations, the DSP&S office is located in Building 2100, telephone 760-355-6313.

Student Counseling and Health Services

Students have counseling and health services available, provided by the pre-paid Student Health Fee. We now also have a fulltime mental health counselor. For information see <http://www.imperial.edu/students/student-health-center/>. The IVC Student Health Center is located in the Health Science building in Room 2109, telephone 760-355-6310.

Student Rights and Responsibilities

Students have the right to experience a positive learning environment and due process. For further information regarding student rights and responsibilities please refer to the IVC General Catalog available online at http://www.imperial.edu/index.php?option=com_docman&task=doc_download&gid=4516&Itemid=762

Information Literacy

Imperial Valley College is dedicated to help students skillfully discover, evaluate, and use information from all sources. Students can access tutorials at <http://www.imperial.edu/courses-and-programs/divisions/arts-and-letters/library-department/info-lit-tutorials/>

Anticipated Class Schedule / Calendar

Math 140-Trigonometry Pacing Guide Summer
2015

June 24

First Day of School

1.1 Angles

1.2 Similar Triangles

June 25

1.3 Trigonometric Functions

1.4 Basic Trig Identities

June 26

2.1 Trig Functions of Acute Angles

2.2 Trig Functions of Non Acute Angles

June 29

2.3 Trig Functions with a Calculator

2.4 Solving Right Triangles

2.5 Applications of Right Triangles

June 30

3.1 Radian Measure

3.2 Applications of Radian Measure

July 1

3.3 The Unit Circle

3.4 Linear and Angular Speed

Review for Chapters 1-3 Test

July 2

More Review

Chapters 1-3 Test

July 6

4.1 Graphs of Sine and Cosine Functions

4.2 Translations of Sine and Cosine Functions

July 7

4.3 Graphs of Tangent and Cotangent Functions

4.4 Graphs of Secant and Cosecant Functions

July 8

4.5 Simple Harmonic Motion

5.1 Fundamental Identities

July 9

5.2 Verifying Trig Identities

5.3 Sum and Difference Identities for Cosine

5.4 Sum and Difference Identities for Sine and Tangent

July 13

5.5 Double Angle Identities

5.6 Half-Angle Identities

Review for Chapters 4 and 5 Test

July 14

More Review

Chapters 4 and 5 Test

July 15

6.1 Inverse Trig Functions

6.2 Trigonometric Equations I

July 16

6.3 Trigonometric Equations II

6.4 Equations with Inverse Trig Functions

July 17

7.1 The Law of Sines

7.2 The Ambiguous Cases of the Law of Sines

July 18

7.3 The Law of Cosines

7.4 Vector Operations and the Dot Product

Review for Chapters 6 and 7 Test.

July 22

More Review

Chapters 6 and 7 Test

July 23

8.1 Complex Numbers

8.2 Trigonometric Form of Complex Numbers

July 24

8.3 The Product and Quotient Theorems

8.4 De Moivre's Theorem: Powers and Roots

July 25 Review for Final Exam

July 29 Review for Final Exam

Final Exam

July 30

NOTE: THIS IS A TENTATIVE SCHEDULE. WE MIGHT FALL BEHIND ON A COUPLE OF DIFFICULT TOPICS. IN THAT CASE, WE COULD USE ONE OF THE REVIEW DAYS FOR THE FINAL EXAM.

The following homework assignments must be turned in the following day. They must be stapled neatly. Make sure your name is written on the left top of the page with the section and date. Show every step when you solve the problem; don't just write the problem and the answer. I already have a solutions manual.

**MATH 140 Homework Chapters
1 - 8 Lial, 10th edition**

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