Mathematics 42-30817
Pre-Calculus II
Trigonometric Functions
Winter Quarter 2016
De Anza College

Instructor: Robert Ramsey

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Lecture: Monday thru Friday, 11:30 am to 12:20 pm
De Anza College, Main Campus
Media Learning Center, Room MLC 109

Office Hours: Monday and Wednesday; 1:30 pm to 3:30 pm
De Anza College, Main Campus
PSME Building, Room S33

Text: **Precalculus with Limits, 3rd e/**
Author: Ron Larson
ISBN-13: 9781439049099
Publisher: Cengage
Copyright: 2012

Prerequisites: MATH 41 (with a grade of C or better); or a satisfactory score on the College Level Math Placement Test within the last calendar year.

Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.

About the Course: Math 42 is the second course in the three part pre-calculus series designed to give students a solid understanding in the fundamental concepts necessary to succeed in differential and integral calculus. Topics covered in the three part precalculus series include the theory of functions, trigonometric functions and advanced topics in precalculus, which include series, sequences,

analytic geometry and other topics. The second course in this series, Math 42, focuses on the theories and concepts governing trigonometric functions.

At De Anza College beginning in Fall, 2015 we are phasing out **Larson, *Precalculus with Limits*, 2nd edition** and phasing in **Larson, *Precalculus with Limits*, 3rd edition.**

We will cover the following sections from the Larson, Precalculus with Limits, 3rd edition, textbook:

Chapter 4 (all sections)
Chapter 5 (all sections)
Chapter 6 (all sections)
§10.7 and **10.8**

In addition, in this course, we make use of graphical and numeric techniques to understand the concepts necessary to succeed in Calculus.

Student Learning Outcome Statements (SLO)

- **Student Learning Outcome**: Formulate, construct, and evaluate trigonometric models to analyze periodic phenomena, identities, and geometric applications.

Course Objectives

A. Define and evaluate trigonometric functions using both degree and radian measure
B. Solve oblique and right triangles
C. Solve arc length and sector area problems
D. Graph and analyze the six trigonometric functions
E. Apply trigonometric identities to simplify and evaluate trigonometric expressions and verify other identities
F. Analyze the inverse trigonometric functions
G. Solve trigonometric equations
H. Define the polar coordinate system and introduce polar graphs
I. Examine complex numbers in the complex plane
J. Perform operations with 2D vectors
K. Examine the logic of conditional and bi-conditional statements as they appear in mathematical statements

Study Group Information: Every student is encouraged to form a study group of two to four students. These groups will work together to complete their homework and other course assignments.

Projects: The purpose of the group projects is to place an emphasis on critical thinking, problem solving, and to expand every students understanding beyond the mere mechanical aspects of mathematics. The projects will place an emphasis on expository writing, and making logical connections between topics while understanding the connection between algebraic, formulaic, tabular and graphical presentations of statistical concepts.

Tests: We will cover chapters four, five, six and two sections from chapter ten of the Larson, Precalculus with Limits, 3rd edition textbook. There will be three exams this quarter, near the end of chapters 4, 5, and 6. The exams will be composed of both computational and concept based questions. Each exam will last approximately one hour. The questions on the exam will require the student to demonstrate his or her ability in integrating the methods, ideas and techniques learned in class. Many, but not all, questions will require the student to communicate ideas and conclusions in short essay format.

Finally, there will be no make-up exams unless arrangements are made prior to the date of said exam, and said exam is taken before the regular exam is scheduled. Should any exam be missed, without prior arrangement, that exam will count as zero.

Homework: Homework is intended as a means of increasing every students understanding, and as a means of mastering the course material. Every student is encouraged to register at www.webassign.net with the use of the course key, which will be passed out on the first day of class. Homework will be evaluated for accuracy and completion in order to assess every student's comprehension of material covered in lecture and to provide feedback to students on their progress. All homework is assigned and completed online and counted as extra credit.

Successful completion of every homework assignment should not be interpreted, in and of itself, as sufficient effort to pass Math 42. In addition, handouts passed out in class, and any in-class assignments not completed, should be considered additional home work.

Quizzes: Quizzes will be completed in class. Quizzes will be both announced and unannounced, i.e. pop-quizzes. There will be approximately six quizzes this quarter with the five highest quizzes used to calculate your average quiz score.

The quizzes completed in class are mandatory, and are used to determine your quiz score and indirectly used to complete your class participation grade. The quizzes in class will emphasis information covered during lecture.

Class Participation: Attendance during lecture is mandatory and leaving early is highly discouraged. Students are responsible for all announcements made in class, whether they are present or not. Successful performance in this course requires classroom attendance, completion of all in-class assignments, as well as homework online, and serious effort on the exams, in-class quizzes, and the final.

Final: There will be a two hour comprehensive final exam which will contain material from all chapters covered thru the course of this quarter. The date of the final exam is **Monday, March 21, 2016** from 11:30 am to 1:30 pm in Room MLC 109.

Grading:	3 exams (3 @ 20% each)	60 %
	Homework (Extra Credit)	10 %
	Class Participation	10 %
	Quizzes (Announced and Unannounced)	10 %
	Final	20 %
TOTAL		100 %

Grades will be as follows:

A	=	90.00 to 100.00 %
B	=	80.00 to 89.99 %
C	=	70.00 to 79.99 %
D	=	55.00 to 69.99 %
F	=	less than 55.00 %

Academic Integrity: Any credible accusation of academic dishonesty, no matter how minor, will be investigated, and if found to be meritorious, will be dealt with severely. Students caught cheating will receive an F for that assignment and notice of the offense will be forwarded to the chairman of the department of mathematics and the Vice President for Academic Affairs for further punitive action.

Disruptive Behavior: Unruly or disruptive behavior to include incessant talking, rude, profane, or vulgar language, threatening or violent behavior, and\or any form of disrespect, directed at the instructor or fellow classmates will not be tolerated. Such behavior will result in the immediate and permanent removal of the offending individual from this course. In addition, students are expected to refrain from sending text messages during class.

Important Dates:

Monday, Jan. 4 :: First day of Winter Quarter 2016.

Saturday, Jan. 16 :: Last day to add quarter-length classes. *Add date is enforced.*

Sunday, Jan. 17 :: Last day to drop for a full refund or credit (quarter-length classes). *Drop date is enforced.*

Monday, Jan. 18 :: Last day to drop a class with no record of grade. *Drop date is enforced.*

Friday, Jan. 29 :: Last day to request pass/no pass grade. *Request date is enforced.*

Friday, Feb. 26 :: Last day to drop with a "W." *Withdraw date is enforced.*

Monday, Jan. 18 :: Holiday: Observance of Martin Luther King's Birthday

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Friday, Feb. 12 :: Holiday: Observance of Abraham Lincoln's Birthday

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Saturday-Sunday, Feb. 13-14 :: Holiday: Presidents' Day Weekend (no classes)

Monday, Feb. 15 :: Holiday: Observance of George Washington's Birthday

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March 19-25 :: Final Exams

Friday, March 25 :: Last day to file for a winter degree or certificate.

Friday, March 25 :: Last day of Winter Quarter

Monday, April 4 :: First day of Spring Quarter

	Monday	Tuesday	Wednesday	Thursday	Friday
1	January 4 First Day of Class Syllabus Introductions	5 Sect. 4.1	6 Sect.4.2	7 Sect. 4.3	8 Sect 4.4
2	11 Section 4.5	12 Sect. 4.6	13 Section 4.7	14 Section 4.8	Last day to add 15 is Jan 16 Last day to drop w/ refund is Jan 1
3	Martin Luther 18 King's B-Day Last day to drop with no record of grade	19 Exam #1 (Chapter 4)	20 Section 5.1	21 Section 5.2	22 Section 5.2
4	25 Section 5.3	26 Section 5.3	27 Section 5.4	28 Section 5.4	Last day to request 29 pass/no pass option Section 5.5
5	February 1 Census Day Section 5.5	2 Review for Exam #2	3 Exam #2 (Chapter 5)	4 Section 6.1	5 Make-up day
6	8 Section 6.1	9 Section 6.2	10 Section 6.2	11 Section 6.3	Holiday Lincoln's B-Day No Sat. Sun. Classes
7	Holiday 15 Washington's B-Day	16 Section 6.3	17 Section 6.4	18 Section 6.4	19 Math Lab.
8	22 Section 6.5	23 Section 6.5	24 Review for Exam #3	25 Exam #3	Last day to drop 26 w/ a grade of 'W'
9	29 Section 10.7	March 1 Section 10.7	2 Section 10.8	3 Section 10.8	4 Math Lab.
10	7 Project Trigonometry & Pre-Calculus	8 Additional Topics in Pre-Calculus (3-Dimensional Space)	9 Additional Topics in Pre-Calculus (Vectors and Dot Products)	10 Additional Topics in Pre-Calculus (Cross Products)	11 Math Lab.

11	14 Make-Up day	15 Review for Final Exam (Chapter 4)	16 Review for Final Exam (Chapter 5)	17 Review for Final Exam (Chapter's 6 & 10)	18 Math Lab
12	21 Start of Finals Week Final Exam 11:30 am to 1:30 pm	22	23	24	25
	28 Spring Break	**29** Spring Break	April 30 Spring Break	**31** Spring Break	**1** Spring Break
12	4	5	6	7	8
13	11	14	15	16	17
14	20	21	22	23	
15	27	28	29	30	May 1
16	5	5	6	7	8
17	11	12	13	14	15
18	18				

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