MATH42 ***Precalculus II: Trigonometric Functions*** **Fall 2016**

MATH-D42. Monday through Friday: 8:30am-9:20am in E32
INSTRUCTOR: Nina Danilova
E-MAIL:danilovanina@deanza.edu
OFFICE HOURS: 9:30am-10:20am M,Tu, Fr, Tutorial Center, S43
Course Description: The theory of trigonometric functions and their applications.

Text: ***Precalculus with Limits***, by Ron Larson, 3nd edition, , Brooks/Cole, Cengage Learning

More than ever in your past mathematics experience, *reading* your textbook will be essential. The exercise sets are written with the intent of forcing the student to approach problems graphically and numerically, as well as the traditional symbolic (algebraic) approach. There is such variety in the exercise sets, that a few lecture examples often can't illustrate every type of question in the homework. This make the reading a crucial part of the students day-to-day work. The De Anza College catalog advises students to do at least 2 hours of work outside the classroom for each hour spent in class.

Technology: Students must have a graphing calculator. The instructor will use a Texas Instruments TI-84 plus in lectures. Consequently, the TI-84 plus (or TI-84, TI-83+, TI-83) is recommended for the students, but any graphing calculator that has a "table" feature is acceptable. (The old TI-81 and TI-85 models do *not* have a table feature!). *Any calculators that can do symbolic mathematics such as TI-89 or HP-49 are not allowed on exams and quizzes.*

Pre-requisite: Mathematics 41 or equivalent (with a grade C or better); or a satisfactory score on the College Level Math Placement Test within the last calendar year.
. The second course in this series, Math 42,focuses on the theories and concepts governing trigonometric functions.
We will cover the following sections from theLarson,Precalculus with Limits, 3rd edition, textbook:
Chapter 4(all sections)
Chapter 5(all sections)
Chapter 6(all sections)
§10.7 and10.8
In addition, in this course, we make use of graphical and numeric techniques to understand the concepts necessary to succeed in Calculus.
(SLO)
• **Student Learning Outcome (SLO**)

: 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

Class Rules: Cheating will not be tolerated. While being in class, you should turn off your cell phone or beeper. No walking in and out please. Don't hesitate to interrupt me – your questions are very welcome.

Attendance: Attendance will be taken at each session. **You are expected to attend all classes on time.** If you miss **3 class meetings**, you may be dropped from the class. However this is your responsibility to drop the course officially if you decide not to attend any longer. The students are responsible for any material covered and any announcements made in their absence.

Homework: You are responsible for all assigned **problems of the sections covered in class and all problems given in my handouts. You have to spend two hours of doing homework for each hour in class. I will spend several minutes in the beginning of each class meeting to answer your questions, if any, about homework problems.** The instructor will collect (and grade) HWs ***on the three midterm exam days.*** Usually, no late home assignments will be accepted. You have to staple your homework. Each section should start from a new page. Put the number of each section and the numbers of problems assigned at the top of this page (it helps a lot in grading). Don't forget write your name on the first page.

Quizzes: There will be frequent quizzes usually not announced beforehand. **No make up quizzes!**

Midterms: Three one-hour examinations, each worth 100 points, will be given. Each midterm will be announced beforehand. **No make up examinations!** If you

cannot take a midterm at the time assigned, you can take it earlier letting me know a couple of days earlier. The lowest midterm grade will be dropped.

Final Exam: There will be a mandatory comprehensive two-hour final exam worth 200 points, and this exam *must* be taken during the scheduled exam time on **Wednesday, Dec 14,**
7:00 – 9:00 am

Mini-projects: From time to time you may have mini-projects. Points earned for mini-projects will apply to your total grade. These are bonus points!

Final Grade: Your final grade will be determined based on the following:

Grading Scale:

3 midterms	**200**	**A**	**(89% and more, 534 points)**
Final	**200**	**B**	**(76% - 88.9%, 456 – 533)**
Quizzes	**70**	**C**	**(64% - 75.9%, 384 - 455)**
Home assignments	**60**	**D**	**(51 - 63.9%, 306 - 383)**
Class activities	**40**	**F**	**(<51%, < 306points)**
Project	**30**		
TOTAL	**600**		

Mini-projects: From time to time you may have mini-projects. Points earned for mini-projects will apply to your total grade. These are bonus points!

Important Dates October 9 : Last day to drop with full refund
January 18: Last day to drop with no record of grade
October 8: Last day to add class.
October 14 : Last day to requestPass/NoPass grade
November 18 Last day to drop with a"W".

***** NO OTHER MAKE-UPS WILL BE GIVEN*****

A grade of "I" (incomplete) will be given at the instructor's discretion, if:

i) A student has successfully completed at least 75% of the course work, and
ii) has shown acceptable evidence which justifies his/her incomplete work.

*** (N.B.: It is the student's responsibility to complete the withdrawal process. Student who stop attending class are NOT automatically dropped. A student who stops attending class and does not complete the withdrawal process receives the grade of "F")

Academic Misconduct: Academic dishonesty will not be tolerated. If a student is found cheating on an exam, plagiarizing on writing assignments, or violating other codes of academic integrity, he or she will receive a failing grade for the course and may be reported to the college for an appropriate action. See section on Academic integrity in your current schedule of classes catalog.

If you are student with a disability: For information or questions about eligibility, support services or accommodations to disability (physical or learning disability) see contacts below:

Disability Support Service (DSS): Student Services Building (408) 864-8753;TTY 408) 864-8753

Educational Diagnostic Center (EDC): Learning Center West 110; (408) 864-8839

Special Education Division: 864-8407; www.deanza.edu/specialed

MATH-42 DE ANZA COLLEGE FALL QUARTER 2011

TENTATIVE CALENDAR

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
SEP	**26** classes start Syllabus	**27** Sec. 4.1	**28** Sec. 4.1	**29** Sec. 4.2	**30** Sec. 4.2
OCT	**3** Sec. 4.3	**4** Sec. 4.3	**5** Sec. 4.4	**6** ***Quiz 1*** ***(4.1-4.4)***	**7 Saturday, Oct 8,** **Last day to add** **Last day to drop for refund** Sec. 4.5
OCT	**10** Sec. 4.5	**11** Sec. 4.6	**12** Sec. 4.7	**13** Sec. 4.7	**14 Saturday, Oct 15,** **Last day to request pass/no pass** Sec. 4.8

OCT	**17** Sec. 4.8 **Review for T1**	**18** **Test 1**	**19** Sec. 5.1	**20** Sec. 5.1	**21** Sec. 5.2
OCT	**24** Sec.5.2	**25** Sec. 5.3	**26** Sec. 5.3	**27** ***Quiz 2 (5.1-5.3)***	**28** Sec. 5.4
OCT / NOV	**31** Sec. 5.4	**1** Sec. 5.5	**2** Sec. 5.5	**3** **Review for Test 2**	**4** **Test 2**
NOV	**7** Sec. 6.1	**8** Sec. 6.1	**9** Sec. 6.1	**10** Sec. 6.2	**11** **Veteran's Day**
NOV	**14** Sec. 6.2	**15** Sec. 6.2	**16** ***Quiz 3 (6.1-6.2)***	**17** **Review for Test 3**	**18** **Last day to withdraw with "W"** **Test 3**
NOV	**21** Sec.10.7	**22** Sec. 10.7	**23** Sec. 2.4	**24** **Thanksgiving**	**25** **Recess**
NOV / DEC	**28** Sec. 2.4	**29** Sec. 6.5	**30** Sec. 6.5	**1** Sec. 6.5	**2** Sec. 6.5
DEC	**5** ***Quiz 4(10.7, 2.4,6.5)***	**6** **Review for Test 4**	**7** **Test 4**	**8** **Review for FE**	**9** **Review for FE**
DEC	**12**	**13**	**14** **FINAL**	**15**	**16**

Homework (TENTATIVE)

Section Problems

HW1 4.1 ##1-6(all), 16, 32, 46, 48, 50, 58, 64, 66, 70, 72, 80, 82, 88, 92, 98, 102, 107, 112, 115, 119

HW2 4.2 ##1-4(all),6,10,12,16,24,28,30,34,42,46,52,54,56,58,59,60

HW3 4.3 ##1-4(all), 6, 8, 10, 12, 14, 16 ,20, 24, 28, 30, 32, 34, 38, 42, 44, 46, 48, 56, 60, 64, 67, 69, 70, 71,72, 74, 88

HW4 4.4 ##10, 12, 14, 16, 22, 24, 26, 28, 36, 38, 44, 46, 50, 52, 54, 56, 58, 60, 62, 66, 72, 82, 86, 92, 94, 97, 98, 100, 101, 102

HW5 4.5 ##1-4(all), 6, 8, 10, 12, 22, 24, 28, 32, 34, 38, 40, 52, 58, 62, 66, 68, 70, 74, 78, 80, 87, 90, 94

HW6 4.6 ##1, 2, 5, 6, 7, 9, 16, 34, 36, 44, 50, 51, 52, 54, 62, 64, 66, 72, 73, 86, 90, 91, 92, 93, 95

HW7 4.7 ##1-4(all), 6, 8, 10, 12, 14, 18, 20, 22, 26, 34, 42, 44, 46, 52, 54, 56, 58, 60, 62, 68, 72, 80, 84, 86, 88, 98, 102, 105, 106

HW8 4.8 ##1, 4, 6, 8, 10, 14, 16, 19, 21, 23, 24, 25, 26, 27, 29, 30, 33, 34, 37, 39, 41, 44, 46, 56, 60, 65

HW9 5.1 ##1-4(all), 6, 12, 14, 16, 18, 24, 25-30(all), 31-36(all), 38, 42, 46, 48, 50, 52, 54, 56, 60, 62, 63, 64, 66, 68, 70, 72, 76, 78, 80, 82, 86, 92, 93, 98, 100, 102, 108, 123

HW10 5.2 ##1-8(all), 12, 14, 18, 20, 22, 28, 32, 38, 40, 42, 46, 48, 50, 58

HW11 5.3 ##1-4(all), 6, 12, 14, 16, 17, 18, 20, 22, 24, 26, 28, 30, 32, 36, 40, 46, 56, 62, 72, 80, 88, 89, 93, 95

HW12 5.4 ##1-6(all), 8, 9, 10, 12, 14, 18, 24, 28, 32, 34, 46, 48, 53, 64, 66, 70, 76, 78, 84, 88, 90

HW13 5.5 ##1-10(all), 12, 16, 20, 22, 26, 27, 30, 34, 38, 42, 43, 50, 52, 53, 58, 60, 70, 74, 78, 82, 86, 90, 93, 98, 108, 116, 132, 137

HW14 6.1 ##1-4(all), 6, 7, 8, 10, 18, 22, 26, 30, 36, 40, 42, 45, 46, 47, 48, 49, 50, 51, 52, 53, 55, 56

HW15 6.2 ##1-4(all), 7, 8, 10, 16, 21, 26, 30, 32, 34, 38, 41, 43, 44, 46, 47, 49, 58

HW16 10.7 ##1-4(all), 6, 8, 10, 12, 16, 20, 24, 26, 32, 36, 40, 46, 48, 50, 52, 56, 60

HW17 2.4 ##2, 3, 4, 6, 8, 11, 14, 18, 22, 24, 26, 28, 29, 32, 34, 36, 38, 40, 44, 46, 50, 54, 56, 58, 64, 68, 72, 74, 92

HW18 6.5 ##1-4(all), 6, 10, 12, 14, 16, 18, 20, 22, 24, 34, 36, 39, 40, 44, 48, 52, 54, 62, 68, 72, 82, 84, 86, 88, 92, 94, 98, 100, 102