

West Los Angeles College
Department of Mathematics
Math 241: Trigonometry with Vectors - Fall 2015

Instructor: Carrie Huang

Section: 4504

Time: TuTh 4:30pm – 6:35pm

Room: MSA 202

Office: MSA 202

Office Hours: TuTh: 6:40pm – 7:10pm

Email: huangcy@wla.edu or mancarrie2003@yahoo.com

Textbook: Trigonometry, 5th edition, by Charles P. McKeague/Mark D. Turner

Calculators: A scientific calculator will be allowed for homework, quizzes and exams. Use of a cell phone calculator will be considered cheating. You must have your own calculator for quizzes or exams—**no sharing** and **show all necessary computation**.

Prerequisite: Math125 Intermediate Algebra or Math 128 Basic Intermediate Algebra II with a grade of “C” or better or acceptable level of skills as demonstrated in the mathematics placement process.

Course Description: This course of analytical trigonometry includes solutions of triangle problems, radian measure, graphs of trigonometric functions, trigonometric equations, identities, polar coordinates, inverse trigonometric functions, complex numbers and vectors.

Website: <https://sites.google.com/site/carriehuang0703/wlac-math-241>
(Homework, solution of quizzes and exams will be posted here)

Course Objectives:

By the end of the course, the student should be able to explain concepts, solve problems, and compare and contrast the following topics:

1. The six trigonometric functions
2. Angles, degrees, radians, and angle measurement
3. Right triangle trigonometry
4. Calculators and the values of the trigonometric functions of acute angles
5. Circular functions
6. Arc length and area of sector
7. Graphing and inverse functions
8. Basic graphs
9. Amplitude, period, and phase shift
10. Proving trigonometric identities
11. Solving trigonometric equations
12. The laws of sines and cosines
13. Vectors, an algebraic approach
14. Complex numbers, and trigonometric forms
15. Polar coordinates and equations in polar coordinates.

Student Learning Outcomes:

- Use the trig ratios and the laws of sines and cosines to solve applied problems involving triangles
- Graph sinusoidal functions of real numbers and use them to model periodic processes.

Institutional Learning Outcomes:

- Critical Thinking: Analyze problems by differentiating fact from opinions, using evidence, and using sound reasoning to specify multiple solutions and their consequences.
- Quantitative Reasoning: Identify, analyze, and solve problems that are quantitative in nature
- Communication: Students will show and explain their work in a clear, well-organized manner
- Technical Competence: Utilize the appropriate technology effectively for informational, academic, personal, and professional needs

Math Program Outcomes:

- Apply quantitative thinking processes using basic mathematical operations to solve common academic, workplace, and family problems. (Theme: mathematical operations)
- Use mathematical tools essential for analyzing quantitative problems and for producing solutions. (Theme: mathematical tools)
- Select appropriate math strategies for solving and handling real life problems involving finance, economics, and family issues. (Theme: mathematical problem-solving)

Grading:

Homework	10%
Exams (4)	40%
Quizzes	15%
Comprehensive Final Exam	35%

Letter Grades: A 89-100%; B 79-88%; C 68-77%; D 58-64%; F below 58%

Final Date and Time: Thursday-- December 17, 2015; 4:30p.m. – 6:30p.m.

Any student that does not take the final exam will fail the course directly. The final exam cannot be missed and **MUST** be taken at the time scheduled by college.

Attendance: The student is expected to attend every meeting of all classes for which he or she is registered. Whenever absences “in hours” exceed the number of hours the class meets per week, the instructor may exclude a student from class. ***If a student stops attending a class, it is the student’s responsibility to officially drop the class.*** Students missing class are responsible for finding out what they missed and what is due.

Homework: Homework assignments will be assigned and it will be collected every **quizzes and exams’ date**. It will be graded based on completeness and neatness. Must be clearly marked with homework number, stapled, and done in pencil on regular paper. You are welcome to collaborate on homework assignments, but the work you hand in should be your own. If I suspect out you have copied an assignment, you will receive no point for that assignment. Late homework will be accepted for a maximum of 50% credit. Any late homework must be handed in before the exam on which material appears.

Quizzes: Quizzes will be given as in the schedule in class. These problems will be related to the previous lecture. **No in-class make-up quiz.**

Make-up Policy: Make-ups are generally discouraged, but will be considered on a case-by-case basis. No Make-up exam will be given unless notified to the instructor in advance for extraordinary circumstances with official document. In any event, arrangements for a make-up exam must be made before or within 3 days of the scheduled exam date.

Cheating:

Cheating constitutes academic dishonesty and, in general will be used as part of the course grading process. Penalty may range from no credit for the assignment up to and including exclusion and/or an “F” grade for the course.

Disability: Upon the timely request by the student to the instructor, West Los Angeles College is committed to providing educational accommodations for students with disabilities. Verification of the disability must also be provided. Disability Support services functions are a resource for students and faculty in the determination and provision of the accommodations.

CLASS POLICIES

Food and Drink: Food or drink is prohibited in the classroom with the exception of water bottles, which are permitted as long as they remain closed when not in active use, and are kept away from all equipment.

Behavior: You should be alert and prepared to participate when in class. Please no sleeping, text/talking on phones, reading unrelated material, chatting with classmates about unrelated subject matter, surfing internet on phones, laptops or tablets, or listening to MP3 players while in class. Please always be respectful and refrain from disruptive behavior in class! Turn off or silence your cell phones.

How to Become Successful in Math 241 Class:

1. Attend every class session and be on time
2. Be an active participant in the classroom activities
3. Preview new material
4. Do the homework on a regular basis
5. Make friends in class
6. Ask for assistance (classmate, instructor, tutoring center)
7. Believe in your ability to succeed
8. Be neat, accurate and well organized
9. Persevere
10. Prepare for the tests and the final exam

Note: Syllabus is subject to change at the discretion of the instructor.

Week	Tuesday	Thursday
1	9/1 – Introduction, 1.1, 1.2	9/3 – 1.3, 1.4
2	9/8 – 1.5, 2.1	9/10 – 2.2, 2.3
3	9/15 – 2.4, 2.5, 3.1	9/17 - Review, Quiz # 1 (Chapter1)
4	9/22 – 3.2, 3.3, 3.4	9/24 - Review, Quiz # 2 (Chapter 2)
5	9/29 – 3.5, Review	10/1 – Test # 1 (Chapter 1 & 2)
6	10/6 – 4.1, 4.2, 4.3	10/8 - 4.4, 4.5
7	10/13 – 4.6, 5.1	10/15 - Review, Quiz # 3 (Chapter 3)
8	10/20 – 5.2, 5.3, 5.4	10/22 - Review, Quiz # 4 (Chapter 4)
9	10/27 - 5.5, 6.1	10/29 - 6.2, 6.3
10	11/3 - 6.4, Review	11/5 - Test # 2 (Chapter 3 & 4)
11	11/10 - 7.1, 7.2, 7.3	11/12 - Review, Quiz# 5 (Chapter 5)
12	11/17 - 7.4, Review	11/19 - Test#3 (Chapter 5 & 6)
13	11/24 - 7.5, 7.6, 8.1	11/26 - No class
14	12/1 - 8.2, 8.3, 8.4	12/3 - 8.5, 8.6 Review
15	12/8 - Test#4 (Chapter 7& 8)	12/10 - Final Review
16	12/15 Final Review	12/17 – Final 4:30pm – 6:30pm

Important Dates:

Thursday, November 26 – 29, 2015 – Thanksgiving Holiday (campus closed)

- Last day to ADD a class, Friday, 9/11/2015
- Last day to DROP for a refund and without notification on record, Friday, 9/11/2015
- Last day to DROP with a “W,” Friday, 11/20/2015

ODD Numbers Only

1.1 -- 9, 12, 17, 23, 29, 31, 33, 37, 43, 45, 55, 57
1.2 -- 13, 17, 19, 25, 29, 47, 59, 63, 67
1.3 --- 1, 5, 15, 19, 27, 35, 39, 41, 43, 47, 49, 53, 57, 63
1.4 --- 9, 13, 15, 19, 23, 27, 31, 37, 45, 55
1.5 --- 1, 5, 9, 13, 17, 21, 25, 29, 37, 43, 59, 61, 71, 85
2.1 --- 17, 25, 29, 35, 43, 47, 53
2.2 --- 5, 11, 21, 29, 37, 51, 55, 63
2.3 --- 3, 11, 17, 21, 29, 33, 35, 43
2.4 --- 1, 3, 5, 15
2.5 --- 13, 15, 19, 27
3.1 --- # 13-21, 49, 53, 57, 61, 71, 75 (all odd)
3.2 --- # 5, 15, 19, 31, 33, 37, 51-63, 65, 69, 71 (all odd)
3.3 -- # 1 - 21 (all odd)
3.4 -- # 29, 33, 37, 39, 41, 47, 49
4.1 -- # 53, 55, 57, 59, 63
4.2 -- # 3, 9, 17, 21
4.3 -- # 1, 3, 7, 17, 33
5.1 --- #9, 21, 27, 37, 43, 45, 51
5.2 --- # 5, 11, 17, 23, 25, 45
5.3 --- # 3, 5, 7, 15, 23, 29, 31, 37, 41
5.4 ---# 3, 6, 11, 17, 37, 41
5.5--- # 17, 19, 27, 29, 31, 35
6.1--- # 3, 5, 9, 15, 19, 21, 23, 25, 31, 47
6.2---# 1-11, 13, 15, 17, 19 (odd only)
6.3 -- # 1, 5, 11, 17, 21, 27, 37
7.1--- # 3, 7, 11, 19, 21
7.2---# 7, 11, 15, 19
7.3--# 1, 5, 9, 13, 15
8.1--- # 5, 7, 17, 23, 29, 37, 41, 45, 53, 59, 61, 65, 69
8.2 -- # 1, 9, 19, 23, 39, 45
8.3--- # 1, 5, 7, 21, 33, 41