

Clovis Community College

MATH 111

Plane Trigonometry Online (3 credits)



INSTRUCTOR Mary Caffey

Office Phase IV Faculty Office, Room 403

Office Hours Monday 1:30 - 2:30 p.m.

Tuesday 1:30 - 3:00 p.m.

Wednesday 1:30 - 2:30 p.m.

Thursday 10:00 – 11:30 a.m.

Other times by appointment.

Office Phone (575) 769-4967

8:00 a.m. – 7:00 p.m. Monday through Thursday and 8:00 a.m. – 4:30 p.m. Friday (Mountain Time).

Email Students in this course should correspond with the instructor through the Blackboard Vista mailbox, not the college email address. ***Check the Announcements' area on the Blackboard Vista course homepage each time you log on for important announcements or messages.*** My college email address is mary.caffey@clovis.edu, if needed.

Mailing Address Clovis Community College
Attn: Mary Caffey
Phase IV Faculty Office
417 Schepps Blvd.
Clovis, NM 88101

Fax (575) 769-4190

Faxed material should be addressed as “Attention: Mary Caffey” and should also have the course name and number, your name, and the chapter information **on each page.**

COURSE DESCRIPTION

Prerequisite: A grade of “C” or better in College Algebra within the last two years or a satisfactory score on the Math Placement Test (Accuplacer) taken in the last year. Tom Guldin, the advisor for online courses may be reached at tom.guldin@clovis.edu and can answer any online-related course or placement questions. Trigonometric functions and identities, applications and polar coordinates will be covered in the course.

COURSE MATERIALS

Thinkwell's Trigonometry with Edward Burger “online version”, Thinkwell Corporation. Caution: The online material used in this course can only be registered to and used by one person. You may purchase the Trigonometry

Companion Workbook package in the Clovis Community College Bookstore or go to www.clovis.edu/bookstore for details on how to order by mail.

**Computer
Requirements and
Assistance**

This course requires that you connect to the Internet, register using the information that is packaged with the workbook, and access www.thinkwell.com. The website provides the latest minimum computer configuration requirements. On the Thinkwell website, go to the Help Center to look at the Student's User Guide. If you encounter problems, contact Thinkwell's Technical Support at techsupport@thinkwell.com or call toll free (888) 416-8880, option 3. Clovis Community College also provides technical assistance Monday through Friday, 8:00 a.m. – 4:30 p.m. (MT), by calling the Instructional Technology Help Desk at (575) 769-4004.

Calculator

A scientific calculator such as one of the Texas Instruments TI-30 series is the minimum requirement. Graphing calculators such as the TI-83 or 84 Plus which do not perform algebraic operations are acceptable but not required. Calculators such as the TI-89 or TI-92 are not allowed. The above calculators may be checked out at the CCC library for use throughout the semester. Calculators may be used on **some** exams as noted on the Course Schedule. **A calculator is not permitted on the proctored midterm exam but is permitted on the proctored final exam.**

**ORIENTATION
TO THE ONLINE
TRIG COURSE**

Clovis Community College online math courses all launch from within the Blackboard Vista course shell. On the Blackboard Vista course homepage, you will find a Welcome message detailing the course and links to the Syllabus, Course Schedule, Gradebook, and the Thinkwell courseware website. Become familiar with the content of the Syllabus and print off a copy of the Course Schedule to follow each week. The Gradebook will periodically (not instantly...I have to update this by hand) be updated with Exercise, Exam, Midterm Exam and Final Exam information as the semester progresses. Check your grades that are recorded in the Gradebook and inform me of any perceived mistakes.

Use the instructions that come with the Thinkwell material to register to use the online courseware that gives you access to the lecture videos which deliver most of the course content. Valuable examples and practice exercises are contained in the workbook.

Always begin a session by FIRST going to the Blackboard Vista course website to check if there are new messages from your instructor. Then, click on the Thinkwell Website link and you will automatically be ready to start or continue a trigonometry lesson.

Before starting your first lesson, however, please go through the material listed on the Course Schedule under **“Before the Semester Begins”** and **“Week 1”**. Be aware that you are expected to begin working on the actual trigonometry content near the beginning of the first week of the semester. There is an assignment due (see Week 1 of the Course Schedule) at the end of the first week!

The Thinkwell Trigonometry courseware contains seven chapters. **This trigonometry course will only consist of Chapters 2, 3, 4 and 5.** Chapters 1, 6 and 7 are mostly considered prerequisite algebra material and can be accessed if you want to review an algebra topic. No grades will be taken on any work you may choose to do from Chapters 1, 6 or 7.

**COURSE
OBJECTIVES**

At the end of the course, the student should have a working knowledge of the following content areas:

1. The Trigonometric Functions
 - A. Angles and Radian Measure
 - B. Right Angle Trigonometry
 - C. The Trigonometric Functions
 - D. Graphing Trigonometric Functions
 - E. Inverse Trigonometric Functions
2. Trigonometric Identities
 - A. Basic Trigonometric Identities
 - B. Simplifying Trigonometric Expressions
 - C. Proving Trigonometric Identities
 - D. Solving Trigonometric Equations
 - E. The Sum and Difference Identities
 - F. Double-Angle and Half-Angle Identities
3. Applications of Trigonometry
 - A. The Law of Sines
 - B. The Law of Cosines
 - C. Vector Basics
 - D. Components of Vectors and Unit Vectors
4. Complex Numbers and Polar Coordinates
 - A. Complex Numbers
 - B. Complex Numbers in Trigonometric Form
 - C. Powers and Roots of Complex Numbers
 - D. Polar Coordinates

Objective 1 Upon completion of the course, the student should be able to display, analyze, and interpret data.

- 1-1 – Graph trigonometric functions showing amplitude, period, phase shift, and interpret data.
- 1-2 – Evaluate the six trig functions in the four quadrants.

1-3 – Find the value of an inverse trig function.

1-4 – Graph an inverse trig function.

Objective 2 *Upon completion of the course, the student should be able to demonstrate knowledge of problem solving strategies.*

2-1 – Solve problems involving area of a sector of a circle, angular and linear velocity, arc length, and the area of a triangle.

2-2 – Solve right triangle problems.

2-3 – Use various trigonometric formulas to find exact values of angles (double-angle, half-angle, sum and difference, etc.).

Objective 3 *Upon completion of the course, the student should be able to construct valid mathematical explanations.*

3-1 – Prove trigonometric identities.

3-2 – Simplify trigonometric expressions.

Objective 4 *Upon completion of the course, the student should be able to display an understanding of the development of mathematics.*

4-1 – Solve trigonometric equations.

4-2 – Perform basic vector operations.

Objective 5 *Upon completion of the course, the student should be able to demonstrate an appreciation for the extent, application, and beauty of mathematics.*

5-1 – Solve application problems using right triangle trigonometry, the laws of sines and cosines, etc.

5-2 – Solve application problems using vectors.

GRADING POLICY

Your course average will be determined from four components as follows:

Exercises: 10%

Each of the four *chapters* that will be completed this semester (Chapters 2, 3, 4, 5 only) are broken down into *subchapters* and then *topics*. Each week, several *topics* will be completed to finish each *subchapter*. After each *topic* is completed, an online Thinkwell Exercises set of problems will be worked and automatically graded. When all of the *topics* for a given *subchapter* are completed, the Thinkwell Exercises scores for each topic will be averaged together to give *one Exercise grade for that subchapter*. The Exercise grade that will be used to figure your course average will be recorded in the Gradebook on a regular basis. There will be weeks (see the Course Schedule) in which one subchapter of material will be covered and weeks in which two subchapters of material will be covered, and thus one or two Exercise grades will be recorded in the Gradebook.

The Course Schedule indicates that some of the material learned within each *topic* must be memorized. Make every effort to work the problems without using your notes and calculator usage, especially in Chapter 2, should be kept to a minimum. All of the Thinkwell Exercises sets for the week should be completed by Sunday at midnight (Mountain Time). Late work completed the week after the deadline will be penalized 10% and work more than a week over due will not be accepted.

Allow time to meet deadlines.....do not wait until the last minute to complete your assignments since odd things happen in cyberspace such as servers disconnecting temporarily, etc. Heavy Internet use occurs during the evening hours of 8-10 p.m. and you might want to consider logging on at other times, if possible.

Exams 40%

After completing all of the topics within a given *subchapter*, you will complete an online exam from the Exams section of the Thinkwell program (look on the left side menu on the Thinkwell Homepage for “Exams”), making every effort to work the problems without help from books, notes, etc. **Once an Exam is opened, it must be completed.** Once opened, the exam should also be **printed off** so that the copy may be used later to study for the midterm and final exams. The Course Schedule in Blackboard Vista indicates what material is to be memorized and if a calculator should not be used. The subchapter Exam is automatically graded and feedback on missed problems is given. The subchapter exam(s) for the week should be completed by Sunday at midnight (Mountain Time). Late exams completed the week after the deadline will be penalized 10% and work more than a week over due will not be accepted. The Exam grade that will be used to figure your course average will be recorded in the Gradebook on a regular basis. There will be weeks (see the Course Schedule) that there will be one subchapter exam due and weeks that there will be two subchapter exams due; thus one or two Exam grades per week.

Midterm Exam 25%

The proctored paper-and-pencil Midterm Exam covers all of the material through Week 7 on the Course Schedule. The Exams (over each subchapter) taken through Week 7 will serve as the review for the midterm. The Course Schedule also contains the days the midterm exam may be taken. **Calculators** as well as cell phones, notes, books, scrap paper, formula sheets, etc are **NOT permitted** on the midterm exam. It is expected that fundamental trigonometric formulas be **memorized** and thus will not be provided on the midterm exam. Midterm grades will be posted in the Gradebook.

Students living close to Clovis Community College must take the midterm exam on campus in the Testing Center located in room 109. Students should make an appointment by email through the instructor (not the Testing Center) at least one week before the scheduled exam and should allow three hours for the exam. A photo ID must be presented when the exam is taken.

Distant students must make their own arrangements to take the midterm exam at a secure, proctored site. The instructor must be informed of, and agree to, the arrangements (location, proctor, date, time, etc.) at least ten days prior to the exam. Distant students must also fill out and send the Request for Off-Campus Examination form (available as a link on the Course Schedule, Week 7) to the instructor prior to taking the exam. The Request for Off-Campus Examination form also indicates appropriate proctors and locations for the exam. A photo ID must be presented to the proctor before the student receives the exam.

Comprehensive 25%

Final Exam

A proctored paper-and-pencil Final Exam, covering the content from Chapters 3, 4, and 5 will basically follow the same procedures that were used for the Midterm Exam. A **calculator** described in the syllabus may be used on the final exam. The dates the final exam may be taken are available through the Course Schedule, Week 15. Use the Exams taken over each subchapter from Chapters 3, 4, and 5 as reviews for the final exam.

Grading Scale

Final grades for this course will be available in the Gradebook within five days from the end of the semester. All course grades will be available on the Web within five days by going to www.clovis.edu, then under Quick Clicks on the left menu bar, click on “Check your Grades”

Final grades will be assigned using the following grade scale:

90-100%	A
80-89%	B
70-79%	C
60-69%	D
0-59%	F

ACADEMIC INTEGRITY

Academic dishonesty is an act by a student to use and/or represent the work of other individuals as that of his or her own production and/or creation. Academic dishonesty is unacceptable within the campus and in this course. Students committing acts of academic dishonesty shall be penalized by the assignment of lowered or failing grades on assignments and/or for the entire course depending upon the instructor's evaluation of the severity of the dishonest act. Consult the college catalog for more information on the institutional policy on academic integrity.

NETIQUETTE

Netiquette is using good manners in cyberspace. Since most of the communication over the net is by way of text, be sure your written words are not offensive to the receiver. Remember email is a document, and can be read by someone other than the intended audience. "Flaming" (making personal attacks on a person) is also unacceptable, and will follow the same discipline actions found in the [college catalog](#), including administrative withdrawal at the instructor's discretion. Whether you are in a chat room, writing email or posting to a discussion area, remember to use proper etiquette in consideration of others. If you would like to read more on the subject of netiquette, go to the following links for more information:

<http://www.iwillfollow.com/email.htm> <http://www.albion.com/netiquette/corerules.html>

INCOMPLETE

The incomplete grade of "I" is given for passing work that could not be completed during the final weeks of the semester due to those circumstances beyond a student's control that occurred after the deadline to withdraw from classes. See the catalog for stipulation in the assignment of an incomplete.

ADDITIONAL COMMENTS TO THE STUDENT

- It is the student's responsibility to know what is contained in the **syllabus**.
- **Log off properly** (see the menu bar at the top of each Thinkwell page) each time you exit the Thinkwell program or data may be lost. You don't want to lose your work or an exam because you logged off improperly!
- You are encouraged to start the week's work **early in the week** in case extra time or help is needed.
- **Get help if needed** – just because you elected to take this math course online does not mean you can not get help from me or one of the tutors in the Math Learning Center, room 139.
- It is the student's responsibility to check for **instructor announcements** through the Blackboard Vista homepage each time you log on to work on a lesson.
- You are expected to complete **all** assignments.

~~You are expected to stay on schedule and complete the assignments on~~

- You are expected to **stay on schedule** and complete the assignments on time. **The deadline for the week's work is Sunday at midnight (Mountain Time). Work completed up to a week late will be penalized 10% and work over a week late will not be accepted.**
- The computer system maintains a log each time you enter the online course. **Students are required to log in at least once a week in order to meet course assignment deadlines and to receive additional instructor announcements.** Students who do not log in and who do not communicate with their instructor either through email or by phone *may* be administratively withdrawn from the class. However, it is ultimately the student's responsibility to withdraw from the course if circumstances warrant it.