



## **MAT 111**

### **College Trigonometry**

3 credit hours/ 3 contact hours

**Catalog Description** This course includes circular functions, trigonometric identities, solution of right and oblique triangles, solution of trigonometric equations, polar coordinates, complex numbers including DeMoivre's theorem, vectors, conic sections, sequences and series. Students may not receive credit for both MAT 111 and MAT 112.

**Prerequisite** MAT 110 (C or higher)

### **Textbook and Required Materials**

Precalculus, 4th ed., by Lial, Hornsby, and Schneider (Pearson, 2009)

TI-83 (or TI84 or TI-85 or TI-86) Graphics Calculator (Texas Instruments)

The TI-89 and TI-92 calculators are not allowed in this course.

### **Core Curriculum Competencies**

All courses approved for the general education core curriculum develop a student's critical thinking and/or communication skills.

This course develops critical thinking skills through instruction that emphasizes the understanding of mathematical concepts and the ability to apply these concepts to solving a problem. This will be demonstrated by assessments at the end of each unit and on the common final exam. The student will demonstrate the following critical thinking objectives:

- Evaluate trig expressions and solve trigonometric, inverse trigonometric, and complex equations using mathematical principles including identities, theorems, and definitions in a logical process.
- Solve real world problems involving triangles, vectors, and conics by applying mathematical principles in a logical process.
- Convert from parametric form and polar form to rectangular form and rectangular to parametric and polar by applying mathematical principles in a logical process.

This course develops communication skills through instruction that emphasizes the presentation of mathematical ideas in appropriate, clear, and precise mathematical language. The student will demonstrate the following communication objectives:

- Graph polar and parametric equations, trigonometric functions, inverse trigonometric functions, and conics, interpret the graphs, and explain their properties using clear, appropriate, and precise mathematical symbols and terminology.
- Explain solutions to problems involving trigonometry using clear, appropriate, and precise mathematical symbols and terminology.

**Grading System and Policy** The College-wide grading scale is

91-100 = A, 81-90 = B, 71-80 = C, 65-70 = D, below 65 = F

There will be a comprehensive departmental final exam, which everyone must take (no exemptions), and which counts 25% of the final grade. The remaining 75% will be specified by your instructor's syllabus addendum. All or part of your evaluation in this course may be without your calculator.

**Attendance/ Withdrawal** Before attending classes, you must meet all prerequisites and officially register for all courses. Prompt and regular attendance is your responsibility. You are responsible for all material covered and all assignments made in class. Any time you are absent from a class, laboratory or other scheduled events, it is your responsibility to make satisfactory arrangements for any make-up work permitted by the instructor.

An absence is defined as nonattendance for any reason, including illness, emergency or official leave. If you arrive late to class, you may not be allowed into the classroom and may be considered absent for that period. If you leave

before the instructor dismisses class, you may also be considered absent. All class sessions are important. Any time you miss a class you increase your risk of making a failing grade.

If you quit coming or participating in the course and do not officially withdraw by the withdrawal date for each semester, you will receive a grade of *F*. Your instructor cannot assign a grade of *W*. If you receive financial aid or veterans' aid, your aid may be revised as a result of any changes in your course schedule.

**Instructor availability** Your instructor is available to you outside of class for academic assistance. Full-time faculty members maintain and post regularly scheduled office hours. Part-time faculty members are accessible in a variety of ways, which may include conferences before and after class or by appointment, telephone conferences, and E-mail. The phone number for reaching your instructor is provided on your syllabus addendum.

**See your syllabus addendum** This is a departmental syllabus for all sections of the course. As such, it tries to address issues common to all sections. There will be issues (grading details, office hours, and the like) that are specific to your section, and these details will be covered in an addendum issued by your instructor.

**Activated Electronic Communication Devices** These devices, such as cell phones and pagers are NOT permitted in TTC classrooms. On-call emergency personnel are required to report to their instructors and cannot communicate by electronic means during a testing situation.

**For Students Enrolled in Online or Other Distance-Learning Sections** To confirm that you are actively involved in this course you need to contact the instructor at least once per week. Forms of contact can include (but are not limited to) posting/receiving emails, participating in online class discussions or chat rooms, and completing and submitting course assignments. Please see the instructor's addendum for any additional instructions.

**ADA Statement** The College will make reasonable accommodations for persons with documented disabilities. Students with disabilities should notify Services for Students with Disabilities (located in the Student Success Center) and their instructors of any special needs. Instructors should be notified on the first day of classes.

#### **Textbook Portions Covered**

Unit 1	Trigonometry Introduction	Ch. 5
Unit 2	Analytic Trigonometry	Ch. 6 (sect 1-5)
Unit 3	Trigonometry Identities & Equations	Ch. 7
Unit 4	Trigonometry Applications	Ch. 8 (sect 1-6)
Unit 5	Analytic Geometry	8.7, 8.8, Ch. 10

**Supplementary Help** Extra help is available in The Learning Center (920 bldg, rm 211). Videotapes provided by the publisher are also available in The Learning Center. Many students find these helpful.

**College Information** TTC uses Campus Cruiser e-mail as the standard communication system to send information to students and uses TTC Express to post final course grades. To access your accounts go to [www.tridenttech.edu](http://www.tridenttech.edu).

**Access to computers for academic courses** The college has computer labs available for student use on all three campuses. Students who experience problems with home computers should plan to accomplish their assignments at the college.

**Department Head** Elizabeth White at 574-6538  
**Division Admin. Asst.** 574-6015 (emergencies only)

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