

MT 155

Trigonometry

Class Number:

Spring 2014

Instructor: Laura Callaway

Departmental Syllabus

- I. Course Description (catalog): Selected topics in algebra and analytic geometry. Develops manipulative skills and concepts required for further study in mathematics. Includes linear, quadratic, polynomial, rational, exponential, logarithmic and piecewise functions; systems of equations and inequalities; and introduction to analytic geometry. Students may not receive credit for both MT 150 and MA 109 or for both MT 150 and MA 110. Credit not available on the basis of special exam. Lecture: 3 credits (45 contact hours). Pre-requisites: One of the following: 1. Math ACTE scores of 20 or above. 2. Math ACTE scores of 18 or 19 with concurrent MT 100 workshop. 3. MT 120 (formerly MAH 083) or MT 122 (formerly MAH 080) or MT 125 (formerly MTH 170 or MTH 175). 4. KCTCS placement exam recommendation.
- II. Competencies:
 1. Recognize functions and specify the domain and the range of a given function;
 2. Graph linear, quadratic, polynomial, rational, exponential, logarithmic, and piecewise functions;
 3. Write function expressions and equations of conic sections from data, verbal description, or graph;
 4. Solve applications using linear, quadratic, exponential, logarithmic, and piecewise functions;
 5. Perform operations with functions;
 6. Find inverse functions;
 7. Solve linear and nonlinear systems of equations and inequalities;
 8. Graph parabolas, ellipses, circles, and hyperbolas;
 9. Recognize the equations and important features of the conic sections.
- III. Text: Trigonometry by Lial/Hornsby/Schneider, Pearson/Addison-Wesley, 9th Edition.
- IV. Minimal Course Content (by Section #)*

A review guide with MT 122 (MAH 080) questions is available. **Note:** Most of the material in chapters R(review) and 1 **should be familiar** to the student but will be reviewed **briefly**.

 - R. Algebraic Expressions:

R.1, R.2 and R.3 should be reviewed **by the student**
R.4 thru R.7 should be **briefly** reviewed
 1. Equations and Inequalities:

All sections should be **briefly** reviewed.
 2. Graphs and Functions:

All sections
 3. Polynomials and Rational Functions:

Sections 3.1 thru 3.5 (Note: In Section 3.4, leave out Intermediate Value Theorem and Boundedness Theorem; on Pages 351 and 352, cover problems 1-28).
 4. Exponential and Logarithmic Functions:

- All sections
5. Systems of Equations and Inequalities:
Sections 5.1 and 5.5 **only**
 6. Analytic Geometry:
All sections. (Note: In Section 6.1, p. 613, cover problems 1-18; in Section 6.2, p. 624, cover problems 1-14; in Section 6.3, p. 633-634, cover problems 1-23; in Section 6.4, p. 641, cover problems 1-36).
 7. Further Topics in Algebra:
Section 7.4
- V. Suggestions for Additional Content:
- Systems of Equalities:
Matrix Solution of Linear Systems, Algebra of Matrices, Determinants, Cramer's Rule.
- Further Topics in Algebra:
Sequences and Series, Counting Theory, Basics of Probability.
- VI. Testing: A departmental comprehensive minimal competency exam will be given to all students during finals week and must be taken by all students in order to receive a passing grade. This final exam will be used, in part, to determine the course grade. The student should be aware that he or she is responsible for taking this final exam at the pre-scheduled time noted on the finals week schedule. The instructor must submit the results of this exam along with the final course grade to the Division Chair. The student may use a scientific calculator on the exam; however, graphing calculators will not be allowed (except in those MT 150 sections designated as graphing calculator sections.) IN ORDER TO RECEIVE A GRADE OF A, B, or C IN MT 150, EACH STUDENT MUST SCORE 50% OR HIGHER ON THE DEPARTMENTAL FINAL COMPETENCY EXAM WHICH IS GIVEN DURING FINALS WEEK. A score of 40% up to 50% on this exam may, at the discretion of the instructor, result in a grade of D provided the student has satisfied all other course criteria. If any student does not achieve the required minimal competency score of 50% on the first attempt, he/she will be given one opportunity to retake the exam.
- VII. Supplies: Scientific calculator

INCOMPLETE POLICY*

I: means that part of the work of the course remains unfinished. It shall be given only when there is a reasonable possibility that a passing grade will result from completion of the work. The instructor and student will discuss the requirements for completion of course with the time limit for completion not to exceed a maximum of one year; failure to do so will result in an automatic change of grade from I to E. Each college shall maintain a record of incomplete grades recorded in courses of that college. This record, completed by the instructor at the time the I grade is reported, shall include: (1) the name and number of the student, (2) the course number and hours of credit, (3) semester or session and year of enrollment, (4) signature of the instructor, (5) a brief statement of the reason(s) for recording the incomplete grade, and (6) an adequate guide for removal of the incomplete grade. In the instructor's absence, the division chairperson (or designee), shall forward to the college president (or designee) the appropriate letter grade to replace the incomplete grade.

WITHDRAWAL POLICY*

W: represents a withdrawal from class without completing course requirements. A student may officially withdraw from any class up to and including the date of mid-term with a W grade. After the date of mid-term and through the last class of the semester or session, any student may officially request to withdraw from a course and receive a W which may be given at the discretion of the instructor. Each instructor shall state on the first or second class meeting the factors to be used in determining if a student will be allowed to withdraw during the discretionary period. An instructor shall not assign a student a W for a class unless the student has officially withdrawn from that class in a manner prescribed by the college. The grade of W may be assigned by the College Appeals Board in cases involving a violation of student academic rights or for academic offenses.

DISABILITIES STATEMENT

Ashland Community and Technical College is committed to ensuring that all students with disabilities have an equal opportunity in the pursuit of their educational objectives. **If you have a documented disability and need accommodations, contact the Disabled Student Services Coordinator at 606.326.2051 or in Room 220. You MUST also inform your instructor(s) of your needs at the beginning of the semester.**

Fairview Specifics

Grading

Your course grade will be determined according to the guidelines set forth at the beginning of the school year for this course:

Tests – 50%

Classwork, Homework, Quizzes, Other Assignments – 50%

In order to receive credit for Trigonometry, you must have an average grade of 70% and you must score 50% or higher on the comprehensive departmental final

Textbook

Classroom Guidelines:

- 1) **RESPECT your classmates and all teachers.**
- 2) **Be IN YOUR SEAT and ready to begin when the bell rings.**
- 3) **Bring ALL materials to class.**
- 4) **Remain quiet and pay attention during instruction.**

Classroom Consequences:

Warning: name on the board

1 check: 15 minutes after school on Friday (also, stay after class to talk to me)

2 checks: 30 minutes after school on Friday

3 checks: 45 minutes after school on Friday, action plan written, and I will call home

4 checks: 1 hour after school on Friday or office referral to Mr. McPeck

Severe offense: sent directly to the office

Tentative Course Schedule	
Aug 12-16	1.1, 1.2, 1.3
Aug 19-23	1.3, 1.4, Ch 1 Test
Aug 26-30	2.1, 2.2
Sept 3-6 (4)	2.3, 2.4
Sept 9-13	2.5, Ch 2 Test, 3.1
Sept 16-20	3.1, 3.2, 3.3
Sept 23-27	3.3, 3.4
Sept 30-Oct 2 (3)	Ch 3 Test, 4.1
Oct 7-11	4.2, 4.3
Oct 14-18	4.3 4.4
Oct 21-25	4.4, Ch 4 Test
Oct 28-Nov 1	Midterm Review, MIDTERM
Nov 4-8 (4)	5.1, 5.2
Nov 11-15	5.2, 5.3
Nov 18-22	5.3, 5.4
Dec 2-8	5.4, 5.5
Dec 9-13	5.5, 5.6
Dec 16-20	Ch 5 Test
Jan 6-10	6.1, 6.2
Jan 13-17	6.2, 6.3
Jan 21-24 (4)	Ch 6 Test
Jan 27-31	7.1, 7.2
Feb 3-7	7.3, Ch 7 Test
Feb 10-14	8.1, 8.2
Feb 18-21 (4)	8.2, 8.3
Feb 24-28	8.3, 8.4
March 3-7	8.4, Chapter 8 Test
Mar 10-14	Review
Mar 17-21	Review
Mar 24-28	Review / Final
April 7-11	Intro to Calculus
April 14-18	Intro to Calculus
April 21-25	Testing (tentative)
April 28-May 2	Senior Trip (tentative)
May 5-9	Graduation Practice