

**Mississippi Valley State University
Fall 2018**

College: Arts & Sciences	Department: Department of Mathematics, Computer & Information Sciences
Course Number: MA 112	Course Name: Plane Trigonometry
Instructor: Candace Carter Stevens	Class Meetings: MW 11:00-12:15 pm CRB 104
Office Location: CRB 140	Phone: 662.254.3398
E-mail Address: ccarter@mvsu.edu	Office Hours: MWF 9-10am, 12-1pm, 2-3pm

Textbook: [WebAssign Instant Access for McKeague/Turner's Trigonometry, Single-Term, 8th Edition](#)

- **ISBN10:** 1-337-87965-7
- **ISBN13:** 978-1-337-87965-1
- **AUTHORS:** McKeague/Turner

To access book please login to www.cengagebrain.com/course/166807

Class KEY mvsu 9311 5778

I. COURSE DESCRIPTION

Definition of six trigonometric functions, right triangle trigonometry, radian measure, graphing and inverse functions, identities and formulas, equations, triangles and complex numbers.

II. PURPOSE

The purpose of this course is to make students understand the definitions and principles of trigonometry and their application to problem solving.

III. COURSE OVERVIEW

This course represents a competency-based approach designed to enable students to develop skills specific to knowledge, comprehension, and application levels of learning. Topics include: The Six Trigonometric Functions, Right Triangle Trigonometry, Radian Measure, Graphing and Inverse Functions, Identities and Formulas, Trig. Equations, Solving Triangles.

IV. COURSE RATIONALE

This course should enable the students to: a) build new mathematical knowledge through problem solving, b) recognize reasoning and proof as fundamental aspects of mathematics, c) organize and consolidate their mathematical thinking through communication, d) recognize and use connections among mathematical ideas, and e) create and use representations to organize, record and communicate mathematical ideas.

This document does not constitute a contract with the university. It contains guidelines and I reserve the right to make changes on this syllabus as needed.

RELATIONSHIP WITH THE HOLISTIC TRANSFORMER MODEL (HTM)

Due to the nature of this course, the student is forced to use the scholarly approach to critically reflect upon their thinking to solve problems. Technology is constantly changing and students of this course are made aware of this. To keep abreast of technological advances, learning has to take place continuously. Students are shown how computers and application software are used to facilitate learning. Finally, students of computer science and mathematics have to be scholars to combat the goals and objectives set forth for the course.

V. COURSE OBJECTIVES AND GOALS

The objectives and goals of this course are:

1. To provide students with adequate exposure of subject matter to prepare them for a more in-depth study of upper level mathematics courses.
2. To help students develop their critical thinking, technological and mathematical writing skills.
3. To help students develop a step-by-step procedure for solving problems.
4. To prepare students to communicate mathematically both orally and in writing.

Student Learning Outcomes

At the conclusion of the course, students should be able to solve problem involving the following concepts:

1. Apply the Pythagorean Theorem and Definition I of Six Trigonometric Functions. Use the Distance Formula to find the distance between two points. Identify the signs of the Trigonometric Functions
2. Apply Definition II of Trigonometric Function to solve right triangles. Apply the Cofunction Theorem. Convert angles between Degrees, Minutes to and from Decimal Degrees.
3. Convert angles between degree measure and radian measure. Evaluate Trig. Functions of special angles.
4. Graph Sine and Cosine Curves, Identify amplitude, period, and phase shift.
5. Prove Identities in Trigonometry. Apply the Sum and Difference formulas, the Double-Angle and Half-Angle Formulas.
6. Solve simple trigonometric equation.
7. Apply the Law of Sine and Cosine to solve triangles including ambiguous case.

VI. Learning Activities:

- a. Solve all problems in exercise sets
- b. Demonstrations of mathematical concepts, skills and strategies,
- c. Participate in class discussion.
- e. Participate in exams and final examination.
- f. Search Websites for articles/related exercises.

VII. Technology Infusion

. Students will use the internet/software to explore activities on a given concept.

*****Note** *You are responsible for submitting your work on the software, if given. I do not have control over technical issues you may encounter with YOUR computer at home. Therefore, if you do not submit your work to me by the deadline because of technical issues, then you should find*

This document does not constitute a contract with the university. It contains guidelines and I reserve the right to make changes on this syllabus as needed.

another avenue to do your work. (The Math Lab 108/109 is open for your convenience from 8am-5pm).

VIII. Calendar of Activities/Course Outline/Schedule

Exam 1 Material

Week	Dates	Section Title The Six Trigonometric Functions	Important Information
1	8/20-8/24	Introductions, Syllabus, WebAssign Orientation, Lab accounts, Temporary Access Codes, Pre-TEST, Homework Assignment	
2	8/27-8/31	1.1: Angles, Degrees, and Special Triangles 1.2: The Rectangular Coordinate System Quiz 1.1 -1.2	
3	9/3/-9/7	9/3 (MONDAY) Labor Day Holiday—NO CLASS 1.2: The Rectangular Coordinate System 1.3: Definition I: Trigonometric Functions Quiz 1.2-1.3	
4	9/10-9/14	1.4: Introduction to Identities EXAM 1	9/10 MONDAY Last Day to Drop/Add Classes Registration Closes

Exam 1 is 9/12 Failure to report for exam will result in a penalty. See exam rules.

Exam 2 Material

Week	Dates	Section Title Right Triangle Trigonometry	Important Information
5	9/17-9/21	2.1: Definition II: Right Triangle Trigonometry Quiz 2.1	
6	9/24-9/28	2.3: Solving Right Triangles Quiz 2.3	
7	10/1-10/5 MIDTERMS WEEK	Midterm Review MIDTERM EXAM WEDNESDAY, Oct 3	MIDTERM WEEK
8	10/8-10/12	3.1: Reference Angle 3.2: Radians and Degrees Trigonometry RESEARCH Project	10/8 Monday-10/10 Wednesday Academic Advisement 10/11 Thursday Online Registration begins for Spring 2019

Exam 2 is 10/3. Failure to report for exam will result in a penalty. See exam rules.

This document does not constitute a contract with the university. It contains guidelines and I reserve the right to make changes on this syllabus as needed.

Exam 3 Material

Week	Dates	Section Title Radian Measure/	Homework and Quiz Expiration Date
9	10/15-10/19	3.3: Definition III: Circular Functions Quiz 3.3	
10	10/22-10/26	3.4: Arc Length and Area of a Sector Quiz 3.4	
11	10/29-11/2	4.1: Basic Graphs 4.2: Amplitude, Reflection, and Period Quiz 4.1-4.2	
12	11/5-11/9	EXAM 3 REVIEW EXAM 3	11/9 Friday Last Day to Withdraw from the University

Exam 3 is 11/7. Failure to report for exam will result in a penalty. See exam rules

Continuation of Material

Week	Dates	Section Title Graphing and Inverse Functions	Homework and Quiz Expiration Date
13	11/12-11/16	5.1: Proving Identities 6.1: Solving Trigonometric Equations Trigonometry RESEARCH Project	
14	11/19-11/23	NO CLASS----FALL BREAK/THANKSGIVING HOLIDAY NO CLASS!!!!	
15	11/26-11/30	7.1: The Law of Sines 7.2: The Law of Cosines Quiz 7.1-7.2	
16	12/3-12/7 FINAL EXAMS' WEEK	<i>Final Exam Location: TBD</i>	Please bring 2 pencils ONLY!!! Calculators are optional.

NOTE: Failure to adhere to any of the preceding statements could cause a decrease in the FINAL GRADE!!!!!!

IX. Methods of Assessing Objectives/Grading

Classroom Activities	55%
Quizzes /	[20%]
Exams 1 & 3	[20%]
Exam 2Midterm	[15%]
Homework.....	20%
Final Exam.....	25%

This document does not constitute a contract with the university. It contains guidelines and I reserve the right to make changes on this syllabus as needed.

X. Grading Scale

The evaluation methods, with exception to the midterm and final exam, may vary with instructors.

Grading Scale

Score (Average)	Grade
90-100	A
80-89	B
70-79	C
60-69	D
Below 60	F

XI. Cheating, Plagiarism/Academic Integrity and Penalties:

Cheating is a serious offense and will not be tolerated. You are expected to complete your own work, although you are free to seek assistance with similar problems before submitting your homework problems. Any student found cheating on homework or any other class activity will be subject to disciplinary action. Penalties for academic dishonesty might include the assignment of an "F" for the course grade and/or other administrative penalties consistent with the policies of the university.

XII. Attendance Policy:

Regular and punctual attendance is required of all students for all classes and related activities. All absences in this course are counted until this course has been officially dropped. Students who are absent for any reason whatsoever are expected to do the full work of the course, and are responsible to the instructor for work missed through late registration, illness, or any other cause. The student must realize that while absence from class itself is not justification for receiving a failing grade in a course, missing tests or assignments due to absence from class is a legitimate cause for failure (Student Handbook, pg. 16). It is the responsibility of the student to make arrangements with the instructor in instances where there has been a legitimate reason for the absence which can be documented.

Whenever students have three or more unexcused absences, instructors are required to report the absences to the office of the Dean of Student affairs. *In evening and weekend classes, a student is permitted only one unexcused absence. The student will receive an F in the course when he/she accumulates 3 unexcused absences.*

XIII. Missed Exams:

All students can receive a make-up grade on a missed exam with an approved absence. However, the make-up grade will be replaced with the score of the next scheduled exam. Thus, the exam grade will be recorded twice. **NO MAKE-UP GIVEN ON QUIZZES OR HOMEWORK.**

ADA/Special Needs Statement

Students having any special needs (handicaps, problems, or any factors that may affect their performance in class or require special instructional strategies) should make these special needs known to the instructor during the **first week** of the course. The instructor meets with the student to insure access of available resources in the university and make appropriate instructional modifications.

APA Accommodation:

If you have a disability that qualifies under the American with Disabilities Act (ADA) and require accommodations, contact the Services for Students with Disabilities (SSD) program for information on appropriate policies and procedures. Disabilities covered by ADA may include learning, psychiatric, physical disabilities, or chronic health

This document does not constitute a contract with the university. It contains guidelines and I reserve the right to make changes on this syllabus as needed.

disorders. You can contact SSD if you are not certain whether a medical condition/disability qualifies. (see INFO BELOW)

Mississippi Valley State University is committed to providing reasonable accommodations for students with a documented disability. If you feel you are eligible to receive accommodations for a covered disability (medical, physical, psychiatric, learning, vision, hearing, etc.) and would like to request it for this course, you must be registered with the Services for Students with Disabilities (SSD) program administered by University College. It is recommended that you visit the Disabilities Office located inside the EMAP Computer Lab in the Technical Education (IT) Building to register for the program at the beginning of each semester.

For more information or to schedule an appointment, please contact:

Mr. Billy Benson, Jr., ADA Coordinator
Mississippi Valley State University
Office for Disability Accommodations, EMAP Computer Lab
Technical Education (IT) Building
Itta Bena, MS 38941
Telephone: 662-254-3005 or University College: 662.254.3442
Email: billy.benson@mvsu.edu

XIV. Pagers or Cell Phones

The volume of cell phones and pagers must be turned **off/vibrate** if you have these items with you in class. The noise is distracting not only to the instructor but to your classmates as well.

This document does not constitute a contract with the university. It contains guidelines and I reserve the right to make changes on this syllabus as needed.