

**HAGERSTOWN COMMUNITY COLLEGE
MASTER SYLLABUS**

COURSE: MAT 102 TRIGONOMETRY (3 Credits)

INSTRUCTOR: CJ Lewis

SEMESTER/YEAR: 2017 Fall

COURSE DESCRIPTION:

The study of exponential, logarithmic, trigonometric and inverse trigonometric functions, as well as their applications. Topics include: triangles; trigonometric identities and equations; polar coordinates, equations and graphs; the complex plane and DeMoivre's Theorem.

Prerequisites: MAT 101 or appropriate score on placement test.

TEXTBOOK: (Optional)-the text is accessible through the software. However, it is available at the campus bookstore, packaged with the software access code, for slightly more than just the access code alone.) **If you purchased the access code for MAT 101 Fall 2014 semester or after, you DO NOT need the purchase another access code.**

eText Reference Book for Algebra and Trigonometry, 2nd Edition, Kirk Trigsted, 2015

ISBN #0133975096 (Includes book and MyMathLab software)

Or MyMathLab access code ISBN # 032192375

SOFTWARE: (Required) MyMathLab, access code purchased at the campus bookstore or at www.pearsonmylab.com See the MyLab and Mastering Student Registration Instructions handout. **If you purchased the access code for MAT 101 Fall 2014 semester or after, you DO NOT need the purchase another access code.**

STUDENT LEARNING OUTCOMES:

Course outcomes:

Upon successful completion of this course students will be able to:

1. Use computational techniques and algebraic skills essential for the study of exponential and trigonometric functions, as well as their inverses.. (Computational and Algebraic Skills)
2. Use visualization, spatial reasoning, as well as geometric properties and strategies to model and solve problems involving exponential and trigonometric functions, as well as their inverses.. (Geometric Skills)
3. Critically analyze and construct mathematical arguments. (Proof and Reasoning)
4. Use technology, where appropriate, to enhance and facilitate mathematical understanding, as well as an aid in solving problems and presenting solutions. (Technological Skills)
5. Communicate and understand mathematical statements, ideas and results, both verbally and in writing, with the correct use of mathematical definitions, terminology and symbolism. (Communication Skills)

General Studies Outcomes:

Upon successful completion of this course students will be able to:

1. Apply mathematical methods involving arithmetic, algebra, geometry, and graphs to solve problems.
2. Represent mathematical information and communicate mathematical reasoning symbolically and verbally.
3. Interpret and analyze numerical data, mathematical concepts, and identify patterns to formulate and validate reasoning.

COURSE CONTENT OBJECTIVES:

In this course students will acquire:

1. An understanding of exponential, logarithmic, trigonometric and inverse trigonometric functions, as well as their applications and their graphs.

2. The ability to use inverse functions to solve equations, specifically to solve exponential and trigonometric equations.
3. An understanding of angle measure in degrees and radians, of the unit circle as it relates to the trigonometric functions, and of right triangle trigonometry.
4. Knowledge of trigonometric identities and experience deriving identities.
5. An understanding of polar coordinates, equations and graphs, the complex plane and DeMoivre's Theorem.

ASSESSMENT PROCEDURES: *(explanation of quizzes, projects, etc.; must include three or more evaluations)*

COURSE POLICES:

Hagerstown Community College's Attendance Policy:

Students are expected to attend all classes. In the case of absence due to emergency, or participation in Official College Functions, it is the student's responsibility to confer with the instructor about the absence and missed course work. Further, it is the student's responsibility to withdraw officially from any class, which he or she ceases to attend, and failure to do so will result in the recording of an "F" grade.

Emergency/Inclement Weather: Listen to your local news for cancellations or delays. You may also call the college at 301-790-2800 or log onto the website at www.hagerstowncc.edu.

Academic Integrity: Upon admission to HCC all students are required to uphold an honor system which holds the qualities of honesty and integrity in highest regard for the duration of their educational experience. Academic integrity violations are explained under the Code of Student Conduct published in the Student Handbook, which may be obtained in the Student Activities Office. Become familiar with the Code of Student Conduct. **Academic integrity violations may result in an F for the work involved, an F for the course, or permanent expulsion from HCC.**

Total Hours Of Coursework:

To earn one academic credit at HCC, students are required to complete a minimum of 37.5 clock hours (45 fifty-minute academic hours) of coursework per semester. Those hours of coursework may be completed through a combination of hours within the classroom and hours outside the classroom. Certain courses may require more than the 37.5 minimum hours of coursework per credit.

For most classes, students should expect to do at least 2 hours of coursework outside of class for each hour of in-class coursework.

Credit Hour to Clock Hour Calculation:

Direct Faculty Instruction: 1 hour/week/credit for 15 weeks; 50 min = 1 classroom hour

(50 min x 3 credits x 15 weeks) = 2250 minutes = 37.5 hours

Student Work Outside the Classroom:

(2 hrs x 37.5 hours in class) = 75 hours

Total Time Needed: 112.5 hours

Activity	On Line	Lecture
Outside of the Classroom		
Online Instruction (videos)	30 hours	
Online Assignments/Quizzes	10 hours	
Written Assignments	45 hours	55 hours
Test Preparation	20 hours	20 hours
Testing in the Testing Center	8 hours	
Subtotal	113 hours	75 hours
Inside of the Classroom		37.5 hours
Total	113 hours	112.5 hours

SERVICES FOR STUDENTS WITH DISABILITIES: Students may receive reasonable accommodations if they have a diagnosed disability and present appropriate documentation. Students seeking accommodations are required to contact the Disability Support Services (DSS) office as early as possible. Students may contact a DSS staff member for an appointment at dss@hagerstowncc.edu or at 240-500-2530.

NOTE: THE INSTRUCTOR RESERVES THE RIGHT TO MODIFY THE COURSE CONTENT AND/OR THE EVALUATION (TESTING) PROCEDURES AS S/HE DEEMS NECESSARY.