Hagerstown Community College
MASTER SYLLABUS

COURSE: MAT 161 - Precalculus   (4 credits)
INSTRUCTOR: All   **SEMESTER/YEAR:** Fall 2017

COURSE DESCRIPTION:
This course is a one semester preparation for calculus which is acceptable as a general education course. The concept of a function underlies and unifies the treatment of polynomial and rational functions, exponential and logarithmic functions, trigonometric functions, and coordinate geometry.

Prerequisites: Four units of high school mathematics to include Algebra I and II, plane geometry, and trigonometry or MAT 101.

TEXTBOOK:
Precalculus by Stitz and Zeager, 3rd Edition. Online FREE ebook available at
            www.stitz-zeager.com

LEARNING OUTCOMES:

GENERAL EDUCATION
Upon successful completion of this course, a student should 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 LEARNING OUTCOMES:
Upon successful completion of this course, a student should be able to:
   1. Identify key pieces of information about a function using either the graph or the equation of the function.
   2. Perform standard computations with polynomial, exponential, logarithmic, and trigonometric functions, including solving exponential, logarithmic and trigonometric equations as well as systems of equations.
   3. Demonstrate the ability to use identities to simplify or rewrite an expression.
   4. Solve application problems involving polynomial, rational, exponential, logarithmic and trigonometric functions and systems of equations.
   5. Effectively work in a group setting to solve problems.
   6. Use technology (graphing calculators, scientific calculator, etc.) to assist in the problem solving process.
   7. Use proper terminology to communicate results or to describe how the results were obtained.

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.

Total Time Needed: (37.5 hours per credit) x (4 credits) = 150 hours

Activity	Lecture Course	Hybrid
Outside of the Classroom		
Online Videos		17.5 hours
Practice Problems	25 hours	25 hours
Online Homework	20 hours	20 hours
Written Assignments	30 hours	30 hours
Test Preparation	20 hours	20 hours
Subtotal	**95 hours**	**112.5 hours**
Inside of the Classroom	**55 hours**	**37.5 hours**
Total	**150 hours**	**150 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.