

**Hagerstown Community College**  
**MASTER SYLLABUS**

**COURSE:** MAT 114 - Introduction to Applied Algebra (3 Credits)

**INSTRUCTOR:** Jennifer Szczesniak

**SEMESTER/YEAR:** Fall 2017

**COURSE DESCRIPTION:**

This is an applications-based course recommended for the technology programs. The course focuses on modeling and applications from multiple scientific disciplines and includes collaborative learning. Technologies in the form of graphing calculators and spreadsheet software are employed. Topics include linear, quadratic, piecewise-defined, exponential, logarithmic, and trigonometric functions, as well as vectors, data analysis and units of measure. Approximately two additional hours per week should be expected using online homework and tutorial programs. Total of 45 hours of lecture. Prerequisites: MAT-100 and IST-100. Semesters offered: Fall, Spring.

**TEXTBOOK:**

My Math Lab access code for Basic Technical Mathematics 11<sup>th</sup> edition by Washington and Allyn ISBN 9780134437705

**STUDENT 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, students will:**

1. Develop improved arithmetic skills.
2. Develop improved algebraic skills.
3. Perform computations that involve exponential, logarithmic and trigonometric functions.
4. Solve application problems
5. Solve problems by working constructively in a group setting.
6. Use technology as a tool in the problem-solving process.
7. Use proper terminology and units to communicate results.

**Total Hours of Coursework: 112.5 hours**

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**

<b>Activity</b>	<b>Hybrid</b>	<b>Lecture</b>
<b>Outside of the Classroom</b>		
Online Instruction (videos)	20 hours	2 hours
Online Assignments/Quizzes	40 hours	40 hours
Written Assignments	25 hours	25 hours
Test Preparation	9 hours	9 hours
Testing in the Testing Center	4 hours	
<b>Subtotal</b>	<b>98 hours</b>	<b>76 hours</b>
<b>Inside of the Classroom</b>	<b>18.75 hours</b>	<b>37.5 hours</b>
<b>Total</b>	<b>116.75 hours</b>	<b>113.5 hours</b>

**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](mailto:dss@hagerstowncc.edu) or at 240-500-2530.