Hagerstown Community College
MASTER SYLLABUS

COURSE: MAT 107 Fundamental Concepts of Mathematics I (3 credits Lecture)

INSTRUCTORS: Joseph Mason

SEMESTERS: Fall / Spring

COURSE DESCRIPTION: This course is a program requirement for the AAT degree program (Elementary Education) and will not count as a general education math course.Topics include numeration systems, estimation, operational algorithms for whole numbers, integers, rational numbers, and decimals, basic algebra concepts, elementary number theory, and logical reasoning. The course emphasizes expanding mathematical knowledge, teaching strategies, use of manipulatives, use of technology, and an understanding of the Common Core Standards for Mathematics. Corequisite: MAT 100 or MAT 090 or appropriate score on placement test. (3 Credits) Total of 45 hours of lecture.

TEXTBOOK: Changing the Face of Math Education Book 1, Joseph C Mason

STUDENT LEARNING OUTCOMES:
   General Education Outcomes:
   Upon successful completion of this course, students will learn how 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 Outcomes:
   Upon successful completion of this course students will be able to:
1. Use computational techniques and algebraic skills essential for success in an academic, personal, or workplace setting. (Computational and Algebraic Skills)
2. Use visualization, special reasoning, as well as geometric properties and strategies to model and solve problems. (Geometric Skills)
3. Collect, organize, and display data as well as use appropriate statistical methods to analyze data and make inferences and predictions. (Statistical Skills)
4. Critically analyze and construct mathematical arguments. (Proof and Reasoning)
5. Use technology, where appropriate, to enhance and facilitate mathematical understanding, as well as an aid in solving problems and presenting solutions. (Technological Skills)
6. 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)

7. Work collaboratively with peers and instructors to acquire mathematical understanding and to formulate and solve problems and present solutions. (Collaborative Skills)

Credit Hour to Clock Hour Calculation:

At Hagerstown Community College, for all credit courses, students are expected to spend a minimum of 37.5 combined hours of instructional time and related coursework time per credit hour. This course is a 3 credit hybrid course and achieves the minimum hours (112.5 hours) as outlined in the table below

In Class Instruction		
Face to Face Lecture	28 classes x 1.5 class hours each class hour = 50 min.	35 hours
Outside Class Activities		
Reading material in textbook	17 chapters x 1 hour each	17 hours
Completion of Testing Your Understanding Exercises	126 x 10 min each	21 hours
Completion of Practice Exercises for each chapter	17 chapters x 45 min each	12.75 hours
Completion of homework assignments	17 assignments x 45 min each	12.75 hours
Worksheet Projects	2 worksheets x 1 hour each	2 hours
PowerPoint Projects	2 PowerPoints x 2 hour each	4 hours
Preparing for Exams	3 exams x 2 hours each	6 hours
Preparing for Final Exam	1 exam x 4 hours	4 hours
Taking Final Exam	1 exam x 2 hours	2 hours
	Total Hours	***116.5 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