COURSE: MAT 100 Intermediate Algebra and Statistics, 4 Credits

SEMESTER/YEAR: Fall 2016

LEAD INSTRUCTOR: Rich Campbell, Carrie Hawbecker, Rebecca Kendrick

COURSE DESCRIPTION:

Prerequisite: MAT 099 or appropriate score on placement test. (4 Credits) This is a developmental course covering the topics usually included in a high school Algebra II course. Included are units of linear, quadratic, rational, and radical expressions and equations; rational exponents; and linear and quadratic functions. An introduction to statistics is also included, with units covering frequency distributions, statistical graphics, and measures of center, variation, relative standing and boxplots. A minimum of nine hours per week should be expected using MyMathLab to complete online homework and tutorial programs. Students in this course may be required to attend the Learning Support Center for additional instruction and skill-building exercises. Total of 60 contact hours.

TEXTBOOK: **Required –** MyMathLab access code, ISBN 0321880161
Optional – *Developmental Mathematics* (Guided Notebook) by Trigsted, Bodden, Gallaher. ISBN 0134442202

STUDENT LEARNING OUTCOMES:

Upon successful completion of this course students should be able to…
1. Use mathematical equations to construct and solve word problems in various contexts, and interpret results with appropriate terms and units.
2. Communicate, interpret, and explain mathematical concepts using appropriate symbolic notation and vocabulary.
3. Classify equations as linear, quadratic, rational, or radical and identify techniques to solve each type of equation.
4. Write equations of lines and solve systems of linear equations.
5. Factor polynomial expressions and solve quadratic equations.
6. Perform basic operations (add, subtract, multiply, divide) on rational expressions and solve rational equations.
7. Perform basic operations (add, subtract, multiply, divide) on radical expressions and solve radical equations.
8. Determine whether a relation is a function, identify domain and range, and evaluate functions.
9. Graph linear and quadratic functions and identify key characteristics of an equation's graph (slope, intercepts, vertex, etc.).
10. Construct a variety of statistical graphics and interpret key statistical measures from the graphs. This includes recognizing bad graphs and identifying how they are misleading.
11. Compute and interpret descriptive statistics for given data, including frequency, measures of center, measures of variation, and measures of relative standing.

CREDIT HOUR REQUIREMENT: minimum of 150 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.

MAT 100, a 4-credit course, has an average time commitment of 150 hours:

LECTURE	Direct Faculty Instruction (In Class)	Student Work (Out of Class)
Lecture	50 Hrs. (final exam taken in class)	
Exams		20 Hrs. to Prep 6 Hrs. to Complete
Homework/Quizzes (MyMathLab)		74 Hrs.

HYBRID	Direct Faculty Instruction (In Class)	Student Work (Out of Class)
Lecture	25 Hrs.	
Offline Assignments		23 Hrs.
Exams		20 Hrs. to Prep 8 Hrs. to Complete
Homework/Quizzes (MyMathLab)		74 Hrs.

ONLINE	Direct Faculty Instruction	Student Work
Lecture	25 Hrs. (videos/reading/etc.)	
Offline Assignments		23 Hrs.
Exams		20 Hrs. to Prep 8 Hrs. to Complete
Homework/Quizzes (MyMathLab)		74 Hrs.

COURSE POLICIES:

Honor Code: Upon admission to HCC all students sign a pledge to uphold an honor system which holds the qualities of honesty and integrity in highest regard for the duration of their educational experience.

Services for Students with Disabilities: Students who have a disability are encouraged to identify themselves to the Disability Support Services (DSS) office as early as possible. Reasonable accommodations based on current documentation are provided to qualified students. Contact the Disability Support Services office at 240-500-2628 or at dss@hagerstowncc.edu to request accommodations.