COURSE: MAT 103   **Finite Mathematics   (3 Credits)   Online   (WEB)**

INSTRUCTOR: P. Kessler   **SEMESTER/YEAR:** Spring 2015

COURSE DESCRIPTION:

      This course introduces students to selected topics from finite mathematics. Sets and set relations are used as vehicles to study the real number system, permutations, combinations, and probability. Also included are operating with polynomials, rational exponents, solving first degree equations and inequalities with one variable, quadratic equations, and systems of linear equations with two and three unknowns. Determinants, Cramer's rule, and matrix algebra are employed. Prerequisite: MAT 100 or appropriate score on placement test.

TEXTBOOK: (Must have MyMathLab access code) Text is optional since e-text is available
Finite Mathematics, 10th edition, Lial, Greenwell, & Ritchey, by Pearson, 2012
        ISBN # : 9780321760036

STUDENT LEARNING OUTCOMES:
General Studies 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 Learning 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. 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)

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 hours/week/credit for 15 weeks
      (2 hrs x 3 credits x 15 weeks) = 90 hours

	Direct Faculty Instruction (WEB) 37.5 Hrs. Required	Student Work (Out of Class) 90 Hrs. Required
Online communication, orientation session, notes, videos, e-text, email, discussions, etc.	**37.5 Hours**	
4 Exams (3 Tests and Final Exam)		**12 Hrs. Prep** **8 Hrs. Completion**
Quizzes		**20 Hrs.**
Homework Assignments		**40 Hrs.**
Other Instructor Material		**10 Hrs.**