

Montgomery College
 MA 110 Course Outcomes
Approved Spring 2008

#	<i>Outcome: Upon completion of this course/program a student will be able to:</i>
1.	interpret quantitative information from selected real-world word problems so that data can be encapsulated into suitable mathematical models.
2	write interpretive results in clear, concise English sentences tailored to meet the needs of the target audience.
3.	demonstrate the ability to develop and use mathematical models for predictive purposes, by using linear and quadratic functions to solve application problems from fields such as business, economics, the life sciences, and the social sciences.
4.	determine the regression line model for a set of data points, interpret the model in context, and use the model for extrapolation and/or interpolation
5.	design, categorize, and solve linear systems of inequalities in two variables for the purposes of resource allocation in fields such as manufacturing, nutrition and agriculture. (linear programming)
6.	calculate and interpret probabilities for discrete variables in contexts such as games of chance, stochastic processes, and product screening.
7.	solve finance problems involving simple interest, compound interest, annual percentage yield, future value of an ordinary annuity, present value of an ordinary annuity, loans, and mortgages.
8.	use computer software such as Excel and /or use calculator software such as the TVM Solver, Equation Solver, and/or matrix menus when appropriate.
9.	solve linear systems by the Gauss-Jordan augmented matrix method and/or by using the inverse of the coefficient matrix, when applicable.
10.	do basic operations with matrices that include addition, subtraction, scalar multiplication, and multiplication.
11	apply transition matrices to kth-state probability matrices and calculate stationary matrices in Markov chain problems.