Montgomery College
MA 160 Course Outcomes
Approved Spring 2008

#	*Outcome: Upon completion of this course a student will be able to:*
1.	**Limits** Evaluate limits graphically and algebraically.
2.	Use the graph of a function f(x) to determine if the function is continuous and/or differentiable at a given value of x.
3.	**Derivatives** Find a derivative directly from the definition of the derivative.
4.	Write a verbal interpretation of the derivative as a rate of change in the context of an application, using everyday language and appropriate units.
5.	Identify and apply the appropriate rule(s) for symbolic differentiation to find first and higher order derivatives.
6.	Recognize and use all standard notations for first and higher order derivatives.
7.	Use first and second derivatives to determine the critical numbers, increasing and decreasing behavior, relative extrema, inflection points and concavity of a function; use this information to sketch the graph of a function.
8.	Use the graph of the first derivative of a function to obtain information about the behavior of a function.
9.	Formulate applied problems – business, economic, and life-science, in particular – into mathematical equations using appropriate calculus symbols; solve and interpret the solution of such problems in a real-world context.
10.	**Integrals** Interpret the indefinite integral as an inverse process of differentiation and evaluate indefinite integrals.
11.	Use the Fundamental Theorem of Calculus to evaluate definite integrals.
12.	Set up and evaluate definite integrals to solve applied problems including problems involving area, total change, and average value.