

Montgomery College
 MA 181 Course Outcomes
Approved Spring 2008

#	Outcome: Upon completion of the course a student will be able to:
	Limits
1.	Evaluate limits graphically, algebraically, and numerically.
2.	Interpret limits verbally.
3	Use the definition of continuity to determine whether or not a given function is continuous at a point.
	Derivatives
4.	Understand and distinguish between average and instantaneous rates of change and be able to interpret each within the context of an applied problem.
5.	Find a derivative directly from the definition of a derivative.
6.	Interpret derivatives verbally in the context of an application.
7.	Use first and second derivatives to obtain information about the graph of a function and use the graph of a function to obtain information about its first and second derivatives.
8.	Identify and apply the appropriate rule(s) for symbolic differentiation.
9.	Implicitly differentiate a function.
10.	Use derivatives to determine the extreme values of a function.
11.	Use derivatives to model and analyze a variety of applications, such as problems involving optimization, related rates, and motion.
	Integrals
12.	Interpret the definite integral as a limit of sums.
13.	Interpret the indefinite integral as an inverse process of differentiation and evaluate indefinite integrals.
14.	Determine when and how to apply the Fundamental Theorem of Calculus.
15.	Set up and evaluate definite integrals to solve applied problems, such as problems involving area, motion, and net change.
16.	Technology Use technology to discover, explore, illustrate and understand limits, derivatives and integrals.