

Montgomery College  
MA 280 Course Outcomes  
*Approved Spring 2008*

#	<i>Outcome: Upon completion of this course/program a student will be able to:</i>
1.	Describe surfaces parametrically in three-dimensional space and find an equation of a plane.
2.	Describe and recognize graphs of vector functions and space curves.
3.	Evaluate limits of functions of several variables.
4.	Find equations of tangent planes to surfaces.
5.	Use and apply the Chain rule for derivatives of functions of several variables.
6.	Use LaGrange's Multipliers method to optimize functions of several variables with additional constraints.
7.	Find volumes of solids bounded by surfaces.
8.	Change the order of integration and compute double and triple integrals.
9.	Determine the surface area of the graph of a function of several variables.
10.	Use the Fundamental Theorem of Line Integrals and Green's Theorem to compute line integrals.
11.	Compute the divergence and curl of a vector function.
12.	Use the Divergence Theorem and Stoke's Theorem to compute surface integrals.
13.	Use MATLAB or a similar computer algebra system as a visualization tool and as a comprehensive programming language to solve problems in engineering, mathematics and sciences using Multivariable Calculus.