UNIVERSITY OF CALGARY

FACULTY OF SCIENCE
Department of Mathematics and Statistics

APPLIED MATHEMATICS 219
"MULTIVARIABLE CALCULUS FOR ENGINEERS"

Calendar Description: H(3-1T-1.5)
Techniques of integration, double and triple integrals, partial derivatives, applications.
Prerequisite: Applied Mathematics 217; or Math 249 or 251 or 281 plus Math 117; or consent of the Applied Mathematics Division.
Note: Credit for more than one of Applied Mathematics 219, and either Mathematics 253 or 263 or 283 will not be allowed.

Syllabus

Topics	**Number of Hours**
Techniques of Integration (parts, partial fractions, inverse substitutions)	6
Improper Integrals	1
Numerical Integration (Trapezoidal and Simpson's Rules)	1
Double Integrals (including Polar Coordinates)	5
Centres of Mass with Double Integrals	3
Vector Basics, Determinants	3
Vector Derivatives	2
Triple Integrals (including Spherical Coordinates, Centres of Mass)	5
Parametric Curves	3
Partial Derivatives, the Chain Rule	6
Extreme Values	1
TOTAL:	36

* * * * * * *

2003:07:02 prereq includes block week upgrade and new calc courses Fall 2008
LPB.jlong