UNIVERSITY OF CALGARY

FACULTY OF SCIENCE
Department of Mathematics and Statistics

APPLIED MATHEMATICS 217
"CALCULUS FOR ENGINEERS AND SCIENTISTS"

Calendar Description: H(3-1T-1.5)
Functions, limits, continuity, derivatives, Mean Value Theorem, integrals, Fundamental Theorem of Calculus, applications in the physical sciences.

Prerequisite: A grade of 70% or higher in Mathematics 30 or Pure Mathematics 30 and credit in Mathematics 31; or admission to the Faculty of Engineering including credit in Mathematics 30 or Pure Mathematics 30, and Mathematics 31.

Note: Credit for more than one of Applied Mathematics 217, Mathematics 249, or 251 or 281 will not be allowed.

Syllabus

Topics	**Number of Hours**
Limits and Continuity	7
Derivatives and their basic properties, rules of differentiation, the mean value theorem, L'Hospital's rule	6
Application of derivatives: related rates, graphing, maximization, linearization, Newton's method	6
Antiderivatives, the definite integral, the fundamental theorem, substitutions	6
Exponentials and logarithms, inverse functions, growth and decay, inverse trigonometric functions, hyperbolic functions	7
Applications of integration: areas, volumes of revolution, volumes by slicing, arc length, surfaces of revolution	4
TOTAL	36

* * * * * * *

95.11.21 Effective: Fall 1996
prerequisite to include new calc F2009
LPB:jlong