UNIVERSITY OF CALGARY

FACULTY OF SCIENCE
Department of Mathematics and Statistics

MATHEMATICS 349
"CALCULUS III"

Calendar Description: H(3-1T)
Infinite sequences and series. Polar coordinates, parametric equations, arc length. Vector geometry, differentiation of vector-valued functions. Partial differentiation. Students will be required to complete a project using a computer algebra system.

Prerequisite: Mathematics 253, 263 or 283 or Applied Mathematics 219; and Mathematics 211 or 221.

Note: Credit for both Mathematics 349 and 381 will not be allowed.

Syllabus

Topics	**Number of Hours**
Sequences, Infinite series, Power Series, Taylor Series	12
Review of: Vectors in R^2 and R^3, Lines, Planes, Cross and dot products, and Matrices	4
Curves in R^2 and R^3, Polar coordinates, Parametrization, Arclength	6
Functions of several variables, Limits and continuity, Partial derivatives, Chain Rule, Directional derivative, Implicit functions.	12
TOTAL HOURS	**36**

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