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

Syllabus

Topics	Number of Hours
Sequences, Infinite series, Power Series, Taylor Series	12
Review of: Vectors in $\mathbb{R}^2$ and $\mathbb{R}^3$, Lines, Planes, Cross and dot products, and Matrices	4
Curves in $\mathbb{R}^2$ and $\mathbb{R}^3$, 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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