MATHEMATICS 014

"MULTIVARIATE TOPICS FROM APPLIED MATHEMATICS 219"

Calendar Description: E(16 hours)
   Multiple Integration and Applications.
Prerequisite: Consent of the Department of Mathematics and Statistics or the Faculty of
   Engineering.

Suggested Text: "Calculus, a Complete Course", by Robert Adams, 4th edition (Addison-
   Wesley).

Syllabus

Topics	Textbook Reference
Quadratic Surfaces	10.5
Double Integrals	14.1
Iteration of Double Integrals in Cartesian Coordinates	14.2
Double Integrals in Polar Coordinates	14.4
Triple Integrals	14.5
Change of Variables in Triple Integrals	14.6
Applications in Multiple Integrals	14.7
Mass, Moments and Center of Mass	7.4
Centroids (using double integrals)	7.5
If Time Permits:	
Functions of Several Variables (if time permits)	12.1
Partial Derivatives	12.3

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