

## FACULTY OF SCIENCE Department of Mathematics and Statistics

## Applied Mathematics 505

## Calculus on Manifolds

(see Course Descriptions for the applicable academic year: <a href="http://www.ucalgary.ca/pubs/calendar/">http://www.ucalgary.ca/pubs/calendar/</a>)

## Syllabus

<u>Topics</u> Calculus of Several Variables (Review)	Number of Hours 2
Manifolds, Submanifolds, Bundles	3
Vector Fields, Lie transformation groups	8
Tensors, Differential forms	5
Calculus of forms	3
Lie derivative	3
Integration	6
Baby Morse theory OR Covariant Differentiation and Riemannian Geometry	6
TOTAL HOURS	36

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