EFFECTIVE: MAY 2006
CURRICULUM GUIDELINES

A.	Division:	Instructional	Effective Date:		May 2006
B.	Department / Program Area:	Mathematics/ Faculty of Science & Technology	Revision	X	

3. Inverse Functions: Exponential, Logarithmic and Inverse Trigonometric Functions
    - definitions, properties, and graphs
    - differentiation of logarithmic and exponential functions (any base)
    - logarithmic differentiation
    - differentiation of inverse trigonometric functions
    - applications to related rates
    - limits involving combinations of exponential, logarithmic, trigonometric, and inverse trigonometric functions
    - L'Hôpital's rule

4. Graphing and Algebraic Functions
    - increasing and decreasing functions
    - local extrema
    - Rolle's Theorem and Mean Value Theorem
    - curve sketching
    - concavity; inflection points
    - asymptotic behaviour; limits at infinity; infinite limits
    - applied maximum and minimum problems
    - antidifferentiation
    - rectilinear motion

5. Parametric Equations and Polar Coordinates
    - parametric representation of curves in R^2
    - derivatives and tangent lines of functions in parametric form
    - tangent lines to graphs in polar form
    - definitions and relationships between polar and Cartesian coordinates
    - graphing of $r = f(\ )$

6. Optional Topics (included at the discretion of the instructor).
    - a formal limit proof (using epsilonics)
    - application of the absolute value and greatest integer functions
    - proofs of the rules of differentiation (differentiation formulas) for algebraic functions
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R: Prior Learning Assessment and Recognition: specify whether course is open for PLAR

Not open for PLAR

Course Designer(s) Susan Oesterle	Education Council / Curriculum Committee Representative

Dean / Director Des Wilson	Registrar Trish Angus