THE UNIVERSITY OF BRITISH COLUMBIA

Curriculum Proposal Form
UBC OKANAGAN
New or Change to Course or Program

Category: 1

Faculty: Irving K. Barber School of Arts and Sciences **Unit/Dept.:** Unit 5 **Faculty Approval Date:** April 3, 2007 **Effective Session:** Winter Term 1 2007	**Date:** 11-22-2006 **Contact Person:** Javad Tavakoli **Phone:** 250-807-9535 **Email:** javad.tavakoli@ubc.ca
Proposed Calendar Entries: **MATH 126 (3) BASIC MATHEMATICS: AN ABORIGINAL PERSPECTIVE** **Topics used in university courses: algebra, functions, graphs, basic geometry, trigonometry, exponential and logarithmic functions. Employs cyclical process of analysis and synthesis common to some Aboriginal cultures. Restricted to first year students. Cannot be counted for credit toward the BSc degree. Students who have received credit for MATH 125 cannot receive credit for this course. [3-0-1]** ***Prerequisite:* MATH 11 or equivalent**	**URL:** **n/a** **Type of Action**: **A new course** **Rationale:** There is a need for a university level introductory mathematics course, taught from Aboriginal perspectives, which will prepare students to advance in academic studies. By emphasizing common Aboriginal perspectives the course will encourage Aboriginal students to enroll and succeed in academic study. Aboriginal guest speakers will be invited to present Aboriginal perspectives of mathematics. This is a new mathematics course which will develop mathematics skills required by all other mathematics and statistics courses

http://okanagan.students.ubc.ca/calendar/courses.cfm?code=MATH	**Present Calendar Entry:** http://okanagan.students.ubc.ca/calendar/courses.cfm?code=MATH
MATH 125 (3) **Pre-Calculus** Prepares students for a calculus course. Functions and their graphs; inverse functions; algebraic, exponential, logarithmic, trigonometric functions; trigonometric identities; matrices; determinants; complex numbers; binomial theorem; sequences; series; conic sections. This course is dependent on a minimum enrolment and cannot be taken towards a B.A. or B.Sc. degree. OUC equivalent: MATH 120. **Students who have received credit for MATH 126 cannot receive credit for this course.** [3-0-0] *Prerequisite:* A score of 64% or higher in Mathematics 11.	MATH 125 (3) **Pre-Calculus** Prepares students for a calculus course. Functions and their graphs; inverse functions; algebraic, exponential, logarithmic, trigonometric functions; trigonometric identities; matrices; determinants; complex numbers; binomial theorem; sequences; series; conic sections. This course is dependent on a minimum enrolment and cannot be taken towards a B.A. or B.Sc. degree. OUC equivalent: MATH 120. [3-0-0] *Prerequisite:* A score of 64% or higher in Mathematics 11.
MATH 100 (3) **Differential Calculus with Applications to Physical Sciences and Engineering** Derivatives of elementary functions. Covers applications and modelling: graphing and optimization. OUC equivalent: MATH 112. [3-1-0] *Prerequisite:* Either (a) a score of 60% or higher in MATH 125 **or MATH 126** or (b) a score of 64% or higher in MATH 12. A minimum grade of B in Principles of Mathematics 12 or 64% in MATH 125 **or MATH 126** is strongly recommended.	MATH 100 (3) **Differential Calculus with Applications to Physical Sciences and Engineering** Derivatives of elementary functions. Covers applications and modelling: graphing and optimization. OUC equivalent: MATH 112. [3-1-0] *Prerequisite:* Either (a) a score of 60% or higher in MATH 125 or (b) a score of 64% or higher in MATH 12. A minimum grade of B in Principles of Mathematics 12 or 64% in MATH 125 is strongly recommended.
MATH 116 (3) **Calculus I for Management and Economics** The derivative; rate of change; derivatives of algebraic, logarithmic, and exponential functions; applications to marginal analysis; elasticity of demand; optimization and curve-sketching; functions of several variables; partial derivatives; Lagrange multipliers. OUC equivalent: MATH 116. [3-1-0] *Prerequisite:* MATH 125 **or MATH 126** Mathematics 12. A minimum grade of 'C+' (64%) in Principles of Mathematics 12 is strongly recommended.	MATH 116 (3) **Calculus I for Management and Economics** The derivative; rate of change; derivatives of algebraic, logarithmic, and exponential functions; applications to marginal analysis; elasticity of demand; optimization and curve-sketching; functions of several variables; partial derivatives; Lagrange multipliers. OUC equivalent: MATH 116. [3-1-0] *Prerequisite:* MATH 125 or Mathematics 12. A minimum grade of 'C+' (64%) in Principles of Mathematics 12 is strongly recommended. .