

Syllabus: Stretch Math 103 Summer Component Pre-Freshman Program 2005

Introduction To Calculus: Introduction of concepts and methods of Calculus for students with little or no previous Calculus experience. Problem solving skills, along with the notions of a function, polynomials, elementary transcendental functions, and their mathematical manipulations and applications will be explored. Limits, continuity, and tangent lines will be used to motivate the 1st derivative.

Text: Bulk Pack available through PENNCAP Pre-Freshman Program

NOTE: Text for Math 103: Stewart's *Calculus, Edition 5e* (Mandatory text that will be available just prior to the fall semester beginning).

Grade (Summer Component):	2 hour-long exams	40% each
	HW/Quizzes	20%

(Tentative) **Schedule:**

Week #1:	Introduction, Principle of Problem Solving Function Representations Math Models: A Catalog of Essential Functions
Week #2:	Completion of Catalog of Essential Functions Functional manipulations: New Functions from Old Functions Introduction to Maple Software EXAM 1
Week #3:	Motivation for derivative: Tangent and Velocity Problems Limit of a Function, Limit "TOOLBOX" Precise definition of a Limit
Week #4:	Continuity Tangents, Velocities, and other Rates of Change (1 st Derivative) EXAM 2