

1145-E5-477

Alexander J Barrios* (abarrios@carleton.edu), Carleton College, Department of Mathematics and Statistics, One North College Street, Northfield, MN 55057. *Humanizing Calculus.*

In this talk, we will discuss a slight restructuring of the standard calculus curriculum to incorporate the historical progression of the subject. We view calculus as it was originally discovered by reconsidering two questions from ancient Greece: what is the area of a geometric object and how to compute tangent lines at a point on a curve. These two questions were at the forefront of mathematical research in the 1640's following the introduction of Cartesian coordinates by Descartes and Fermat. This, in turn, shows students that Leibniz and Newton did not discover calculus single-handedly as is usually believed. In addition, we trace the development of the subject throughout the term to emphasize the 200-year journey that it took calculus to achieve its rigorous foundation. (Received September 07, 2018)