

1135-VJ-2230

**Derege H Mussa\*** (dxm146130@utdallas.edu), University of Texas at Dallas, Richardson, TX, **Jigar Patel** (patel@cims.nyu.edu), New York University, NYC, NY , and **Changsong Li** (cxl1109120@utdallas.edu), University of Texas at Dallas, Richardson, TX. *The impact of the Derivatives in Applied Calculus II course: A case study in Applied Calculus II at the University of Texas Dallas.* Preliminary report.

Mathematicians and Mathematics educators provide rich experiences to help students gain a deep understanding of various representations, with and without the use of technology. The formal definition of the derivative in most calculus textbooks relies on both the concepts of limit and function. These two concepts are very critical to understand the derivatives. According to many researchers, students' understanding of function have substantial influence in their understanding of main ideas of calculus such as limits, continuity and the slope of a tangent line. Derivative is fundamental concept for Applied Calculus II course; however students understanding of derivative in the course has significant impact to the course as a whole. The study finds new results on impacts of the derivatives in their performance & their relation with Applied Calculus II course and recommend possible suggestions. (Received September 26, 2017)