

1125-H5-2111 **Mel Henriksen*** (henriksenm@wit.edu). *Learning Calculus Concepts with Desmos – In and Out of the Classroom.*

Today's technology makes the 'rule of four' all the more implementable. But not all implementations are equal. Graphing technology can serve as an excellent way to demonstrate concepts and relationships, but can be used in an even more powerful way by allowing students to build their own graphical models. In this way instructor demonstrations give way to student creations (or, at least, re-creations.) But this requires a graphing technology that is easily learned, is interactive and whose solutions can be stored. The graphing application Desmos meets these criteria and allows students in Calculus to build their own models, exploring, for example, the transition of a secant line into a tangent line. What was once shown by a sketch on the white board, a graphic in a text or even a static plot now can become an interactive tool. Using a combination of an instructor-made video tutorial, pre-designed Desmos files, wireless video presentation and Desmos files created by students in real time in the classroom, Desmos becomes a terrific tool for teaching Calculus concepts. With the addition of web-based conferencing it can be used in virtual office hours as well. (Received September 19, 2016)