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In this talk, we will describe the STEM Accelerator Program at George Mason University which was initiated to increase the number of STEM majors, improve retention rates of STEM students, reduce their time to graduation, and help them join the STEM workforce or continue their education upon completion of their Bachelor's degree in STEM disciplines. Specifically, we will describe some novel initiatives and pedagogical approaches in engaging students that plan to take Calculus in their freshmen year. These include (a) an active-learning approach to teaching calculus; (b) oral reviews co-facilitated by faculty and advanced undergraduates and; (c) a three day mathematics readiness with a one-week pre-college program for incoming college students. The students that were impacted through these initiatives not only completed Calculus successfully, but also went on to pursue a STEM major. (Received September 20, 2016)