Monitoring and Assessing Weekly Homeworks to Improve Student Learning and Success Rates in Calculus Courses
PI: Mark Grinshpon, Department of Mathematics & Statistics
mgrinshpon@gsu.edu
Co-PI: Iman Chahine, Middle-Secondary Education & Instructional Technology
ichahine@gsu.edu
Co-PI: Robert Clewley, Neuroscience Institute
rclewley@gsu.edu

In order to provide the most qualified service to our Calculus students, our proposal targeted the recruitment of four graduate students from the Department of Mathematics and Statistics (GTAs or GLAs) to be graders for Calculus homeworks. Working under supervision of mathematics faculty teaching the courses, the assistants selected will have the necessary skills obtained during their own course of study. Recruiting this cohort of graduate student graders, will enable the department to add a new assessment component to each Calculus section: weekly graded paper homeworks, one per week in average which will be assessed by the graders. We estimate that grading the homeworks for a single section will amount to 2 hours of work a week. Each graduate student grader will be assigned to 4 sections of Calculus. Assigning student graders to Calculus sections will encourage and support teaching faculty to engage students in problem solving tasks that require writing their solution strategies as well as enhance their understanding of Calculus concepts by monitoring their performance on homeworks and tests.