Improving Supplementary Calculus Instruction through Enhanced Coordinated Support of Student Assistants

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

We propose to assign two faculty members from the Department of Mathematics and Statistics to serve as the co-mentors of Calculus I student teaching assistants including Supplemental Instruction (SI) leaders, Mathematics Assistance Complex (MAC) tutors, and GTA/GLA graders. The duties of these faculty members will include organizing weekly meetings with all Calculus I teaching assistants, where they will discuss course content of the week – not only the material per se, but also teaching techniques relevant to particular concepts and/or problems. During these weekly discussions, teaching assistants will learn – from each other as much as from faculty members – which content students find most challenging or have most difficulties with, and accordingly design intervention tasks to emphasize content areas that students struggle with. We believe that coordination of efforts between course instructors, as represented by the faculty mentor and student teaching assistants will improve the quality of academic support provided to students taking Calculus, and thus will directly benefit the academic performance of the students and improve their success in the course. In particular, such coordination will ensure that SI sessions run most efficiently by addressing the specific mathematical content needs of the students.