

1125-A5-2858      **Silvia Saccon\*** ([silvia.sacson@case.edu](mailto:silvia.sacson@case.edu)), Case Western Reserve University, Cleveland, OH 44106. *Promoting students' deep learning in calculus through challenging problem sets*. Preliminary report.

The MAA's Committee on the Undergraduate Program in Mathematics (CUPM) recommends incorporating in every course "activities that will help all students progress in developing analytical, critical reasoning, problem-solving, and communication skills and acquiring mathematical habits of mind." To promote students' learning and development in these areas, I started to include challenging problem sets in calculus courses as part of the out-of-class assignments. These problem sets challenge students to think deeply about the mathematics discussed in class, emphasize writing as part of the learning process, and provide opportunities for students to share their ideas and collaborate in a team. In this talk, I will describe these out-of-class activities, discuss benefits and challenges of incorporating them in calculus courses, and review feedback from students and impact on their learning. (Received September 20, 2016)