A mathematics learning center can be an invaluable part of undergraduates’ experiences with mathematics, as well as an opportunity for talented undergraduates to hone teaching skills they may need in future careers. However, many of these peer tutors are asked to assist with mathematics courses that they never took as university students—if at all—creating a unique tension among the expectations of the underclassmen taking these classes, the upperclassmen tutoring these topics, and the faculty assessing students’ progress. Although selecting top-notch tutors is a crucial part of a learning center’s success, we also believe that training tutors to be successful—particularly in courses with which they are less familiar—plays a key role in an effective tutoring process. We will describe the steps our mathematics faculty have taken to increase tutor efficacy (and, thus, student satisfaction) in our learning center and explore both faculty and student perspectives on the impact of these actions on the quality of mathematics tutoring in our campus learning center. (Received September 22, 2012)