Academic support programs are essential when it comes to increasing student success. Such programs are particularly vital for the mathematical sciences, which have historically lower success rates. Building a program that provides effective academic enhancement opportunities for all students requires a consideration of many factors. One must identify the areas of greatest need and provide high impact instructional support while considering a myriad of resource limitations. In this talk, we will examine a supplemental instruction program and highlight the key factors that contribute to quality academic enhancement. We will provide both statistical evidence and qualitative feedback about the effectiveness of such a program. We will also highlight the mentorship and professional development opportunities afforded our Supplemental Instruction (SI) Leaders that truly make learning a vertically integrated, dynamic collaborative experience. (Received September 20, 2016)