Activities, experiences, and results from creating a blended math and science cohort of upper-level undergraduates and graduate students in the M.S. in Applied Mathematics program are summarized. With funding support from the National Science Foundation’s Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM) program, we seek to expand recruitment, improve retention, and further develop student skills in applied mathematics. Each year, need-based scholarships support six new graduate students and ten new junior or senior undergraduates in addition to those already in the program. Scholarship program activities establish a supportive connection of master’s students with undergraduates. Science majors take coursework towards a minor or double major in a mathematical area. Through networking of science and mathematics majors, cohort students participate in interdisciplinary activities, investigate careers or graduate schools, communicate with external mentors, and attend workshops on use of mathematical software and technology. Many sponsored events are open to the community and positively impact the local academic culture. On assessments, students report improved satisfaction with the academic environment, their selected major, and their career plans. (Received September 22, 2011)