In AY2015-2016 and AY2016-17 Rose-Hulman Institute of Technology offered a Preparation for Industrial Careers in Mathematics (PICMath) course to undergraduate students. 16 students enrolled across the two academic years and successfully completed 4 different projects. In this talk we detail our experience soliciting sponsors for project, coordinating effort with the sponsors, and shepherding students through the research experience. We hope to offer a perspective that is somewhat different from that of other schools, as many of our students are primarily engineering or computer science majors with a second major or minor in mathematics. In particular, we describe how our motivational and assessment techniques changed from year to year as we gained experience. (Received September 22, 2017)