Peter R Kramer* (kramep@rpi.edu), Department of Mathematical Sciences, RPI, 110 8th Street, Troy, NY 12180. Complementing Applied Mathematics Education with Modeling Contests at Rensselaer.

I will describe how we use practices for the Mathematical and Interdisciplinary Contest in Modeling at Rensselaer to prepare students to perform well in the contest, practice the mathematical modeling process, and learn some broadly useful techniques not typically taught in the classroom. We integrate graduate students and postdocs as coaches into our training of the undergraduates. Participation by women has been increasing (from originally low levels) over the years, and teams with both male and female students have had extraordinarily better success rates than our all-male teams. I'll also discuss some challenges regarding the training of our students and the evolving nature of the contest. Our institute's MCM/ICM training program is one of several activities supported by our mathematical sciences department's NSF Research Training Grant. (Received September 25, 2018)