Terry L. Barron* (tbarron@ggc.edu). A Guide for Understanding and Achievement: Using Developmental Counseling as a Tool to Provide Effective Communication for Calculus Students Learning in a Hybrid Format.

Teaching calculus in a hybrid format is challenging. Time constraints, the pace of content delivery and the expectation of providing timely and effective feedback are all stressors in the hybrid design. Informative and effective communication is paramount to provide students with the critical feedback necessary to be successful in the hybrid environment. Developmental counseling combines feedback based on interdependent pedagogical benchmarks such as mastery of the content, overall progress and inclusive performance. This study compared hybrid calculus classes that used development counseling with hybrid classes that did not use developmental counseling nor specifically any of its components. Results indicate that developmental counseling significantly improves the D-F-W rate for hybrid calculus classes. Conclusions indicate that further research is necessary to study the positive impact of developmental counseling across all mathematics courses and throughout all instructional delivery methods. (Received September 20, 2016)