

1145-Q1-2437 **Joel Kilty** (joel.kilty@centre.edu), Mathematics Department, Centre College, Danville, KY 40422, **Alison Marr** (marra@southwestern.edu), Mathematics Department, Southwestern University, Georgetown, TX 78626, and **Alex M. McAllister*** (alex.mcallister@centre.edu), Mathematics Department, Centre College, Danville, KY 40422. *Enabling Student Persistence and Success in the Calculus Sequence*. Preliminary report.

While traditional methods of teaching and learning mathematics ostensibly served well for decades, the mathematics community is re-examining and re-envisioning these approaches in response to multiple changing realities, which include: evidence that the standard approach “filters” traditionally under-represented students, extremely different levels of student preparedness, the diverse career and continuing education paths of students, more sophisticated technologies, and access to large data sets that enable more realistic and more relevant applications. This talk shares the outcomes of a 2018 project at Centre College and Southwestern University that sought to understand and address filters that inhibit student persistence and success in mathematics and other STEM disciplines, particularly among under-represented minority, first-generation, low-income, and female students. We provide details about two particular efforts that sought to make a positive difference in improving persistence and success:

- designing, implementing, and assessing a pilot cohort model for Calculus I students in Fall 2018, and
- re-envisioning the entire calculus sequence during 2018 with planned implementation beginning in Fall 2019.

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