

1154-97-1594      **Kristin M. Kurianski\*** (kmdett@mit.edu) and **Jennifer French.** *Two models for blended learning in mathematics courses using online content.* Preliminary report.

Success in calculus and differential equations courses has a large effect on success in later engineering courses at MIT. We created a set of interactive online resources that we have used as a free MOOC, as the main course material for a flipped classroom on campus, and as supplementary reading and online homework (blended learning) for a traditional lecture course. Each course is designed to provide motivation, encourage transfer to later engineering courses, and keep students actively engaged with the content. In this talk, we describe the motivation for creating these online resources, an overview of content type and structure, and provide evidence of student engagement via data collected from end-of-term surveys. We also outline two examples of ways in which this online content is utilized in teaching on-campus calculus and differential courses. (Received September 16, 2019)