

1145-E1-2818 **Eric Simring*** (eis108@psu.edu). *Better Calculus through Biology: The Biocalculus Sequence at Penn State University.*

The first-year calculus program at Penn State University serves more than 2000 students each semester at the University Park campus, but the curriculum has been left unchanged since the 1990s. Penn State's new biocalculus sequence is the first large-scale attempt to renovate the calculus program in 25 years. In the four years since its creation, the success rates for life science majors have become significantly higher than in the standard calculus course, with no loss in mathematical standards. The course has grown from 100 students to nearly 500 per semester during its four years. A recent \$1M NSF S-STEM grant awarded to the Eberly College of Science has targeted this biocalculus sequence to triple in size, including expansion to the 19 commonwealth campuses.

In this talk, we'll outline several important factors that we believe contribute to this success: an updated curriculum, student-centered pedagogical practices, and a strong community of practice among teaching and research faculty. We'll also talk about the opportunities and challenges posed by our expected expansion.

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