

1154-97-2705

Ekaterina (Katya) Yurasovskaya* (yurasove@seattleu.edu), Department of Mathematics, Seattle University, 901 12th Ave, Seattle, WA 98122. *Supportive environment in a mathematically rigorous co-requisite lab course ensures student success in the Introduction to Proofs.*

The first course in mathematical proofs serves as a gateway for student entry into mathematics major. The course presents many difficulties to students, who learn to write rigorous formal proofs, encounter challenging and abstract new material. In order to help students succeed, Seattle university has created a co-requisite problem-solving lab course that we called Mathematical Communication. Combining elements of Math Circles and the Treisman model, the lab course features problem-solving, group work, formative feedback, no grades, and a carefully and deliberately constructed warm and supportive environment for all students. As a result, we have been able to cut non-passing rates in half and increase the number of A's and B's for at-risk students. The lab course is straightforward and inexpensive to implement, and we are very excited to share the model with you in this talk. (Received September 17, 2019)