

1106-N1-2639

Dana C. Ernst* (dana.ernst@nau.edu) and **Nandor Sieben** (nandor.sieben@nau.edu).

Transitioning students from consumers to producers. Preliminary report.

In response to assessment reports identifying weaknesses in communication and reasoning of junior and senior mathematics majors, we have developed a 3-credit semester-long course that is required for all first-year mathematics majors. The focus of this course is on reasoning and communication through problem solving and written mathematical arguments in order to provide students with more experience and training early in their university studies. The goal is for the students to work on interesting yet challenging multi-step problems that require almost zero background knowledge. The hope is that students will develop (or at least move in the direction of) the habits of mind of a mathematician. The problem solving of the type in the course is a fundamental component of mathematics that receives little focused attention elsewhere in our program. The course will be taught via an inquiry-based learning (IBL) approach with an explicit focus on students asking questions and developing conjectures. In this talk, we will describe the structure of the course and our plan for transitioning students from “consumers” of mathematics to “producers”. (Received September 16, 2014)