

1154-97-289

Chad Estabrooks* (chad.estabrooks@westpoint.edu) and **David McArdle**. *The Design and Implementation of a Course in Mathematical Research and Communication*. Preliminary report.

The design and implementation of a project-based, student-focused course in mathematical research and communication is described. Each student in the course chose an exercise from their assigned textbook from a short approved list, and were asked to write a paper containing all of the background necessary to solve this problem, as well as the final solution. This was intended to expose students to the foundation of mathematical research, as they were asked to approach their chosen problem as though it were an open problem. At the end of the semester, students were also required to prepare and deliver a presentation on the work that they did throughout the semester. All of the students involved had taken a course in real analysis the previous semester, and the underlying material for the course was topology. None of the students had experience with the subject outside of the topology of the real line and basic metric spaces from their real analysis course. (Received August 29, 2019)