

1010-97-12

**Richard O. Hill\*** ([hill@math.msu.edu](mailto:hill@math.msu.edu)), Department of Mathematics, Michigan State University, E. Lansing, MI 48824. *Some Surprising Mathematical Deficiencies of Future High School Math Teachers*. Preliminary report.

For the last two fall semesters, we have offered a senior-level capstone course for future high school math teachers, a course team-taught by a mathematician and a mathematics educator. The prerequisites included being a math major,  $\text{GPA} > 3.0$ , having completed the core junior-level math courses, and being admitted to the College of Education. The purpose of the course is to look at high school mathematics from an advanced standpoint (using the textbook by Usisken et al., but supplemented somewhat) and also examining some extensions and generalizations of the mathematics that arose. However, we ran into several topics that we thought these students knew, indeed had been covered in their previous math courses, but they did not. These topics will be discussed, together with the strategies we took to deal with the deficiencies. (Received June 08, 2005)