1086-97-340 **Richard S Millman***, CEISMC, 760 Spring St, NW, #102, Atlanta, GA 30308, and **Daniel Connelly** and **Cher Hendricks**. *A Course of Proofs and Higher-level Abstract mathematics for High Achieving High School Students.* Preliminary report.

The goals of the course are to develop a mathematical habit of the mind, to work individually and in teams to solve mathematical problems, and to be prepared for higher-level abstract mathematics courses. Our approaches are to help students construct valid proofs (sometimes motivated by examples), identify the fallacious reasoning of incorrect proofs, and to apply mathematical rigor to problem solving. The course was taught to 10 high school students (after 19 the previous one) all of whom have had at least three semesters of calculus, in a charter school in a large metro area. Specific areas include number theory, its application to cryptography, and the non-silo approach to mathematics. A description of the course and the two years that it was taught will be described. Analysis of feedback from the students will be presented. (Received August 22, 2012)