The primary aim of this research was to test the hypothesis that high school, college preparatory, math courses are ineffective at actually preparing students for college level mathematics. The preliminary study sought to determine what correlation exists between the mathematics courses a student took in high school, and their placement into, and successful completion of, a mathematics course at a four-year university. The results of the data analysis revealed a statistically significant, but weak, correlation between high school, college preparatory mathematics courses and successful placement into a college level mathematics course upon entering a four-year university. A similarly significant, but also weak correlation was found between college preparatory mathematics courses, both the courses taken and the grades received in those courses, and college mathematics course grades. As a result of these findings, the research sought to determine which factors were also correlated with successful math course placement and performance, such as ethnicity and gender. (Received October 05, 2004)