

# Preparatory Year Program Courses as Predictors of First Calculus Course Grade

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This study investigates the effect of the preparatory year program courses on the first calculus course (Calculus I) at King Fahd University of Petroleum & Minerals (KFUPM). The data consists of more than 2000 bilingual Arab students studying in the English language, tracked over seven semesters. These students represent over 70% of all entering first year students into KFUPM degree programs. Using the software SAS 9.0, our multiple regression analyses found that at KFUPM the success in a Calculus I course depends mainly on the two preparatory year mathematics courses, and their interaction. Another variable that contributed significantly in the model is the second preparatory year English. The old mathematics placement requirement was found to produce higher predicted grades for performance in Calculus I compared to the new requirement.