IMPACT OF MATHEMATICS IN LEVEL 1 ON THE ACADEMIC PERFORMANCE OF ENGINEERING STUDENTS: A CASE STUDY

K. A. D. S. A. NANAYAKKARA & T. S. G. PEIRIS

Department of Mathematics, Faculty of Engineering, University of Moratuwa, Moratuwa, Sri Lanka

ABSTRACT

In engineering sciences, mathematical knowledge is highly essential to improve the analytical thinking of engineering undergraduates. Therefore, a significant component of advanced mathematics has been included in the engineering degree programs. The objective of this study is to explore the impact of mathematics in Level 1 on the academic performance of undergraduate engineering students in Level 2. The study was conducted with engineering students at the University of Moratuwa, Sri Lanka. Findings revealed that the mathematics performance in Level 1 was significantly correlated with students' overall performance in all engineering disciplines. The impact of mathematics in Semester 2 was significantly higher than the impact of mathematics in Semester 1 on the students' performance in Level 2. Furthermore, the impact of mathematics was significantly different among various engineering disciplines. The study concluded that the performance in mathematics in Level 1 could indicate the trend towards the student academic performance in all engineering programs

KEYWORDS*: Engineering Mathematics, Multivariate Multiple Linear Regression, Students' Academic Performance*