



## Variation of Mathematics Knowledge of Engineering Students

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### Abstract

The engineering student needs to grasp basic principles of mathematics in order to learn engineering subjects. It is common knowledge that the students struggle in the mathematical component of their engineering degree courses. In this research we explored the main mathematical problems faced both by students and the teachers. There is a belief among some academics that the mathematical knowledge of the engineering students deteriorate during their four year stay at the university. Aim of this research was to ascertain the validity of this belief and to find the role of mathematics in engineering practice. For the purpose of this study a random sample of 50 final year engineering students of the faculty of engineering, University of Ruhuna were selected. All these students had taken the advanced level examination in 2008. Research consisted of two components, quantitative and qualitative. For the quantitative component, a question paper consisting of five questions were prepared. The level of these questions were set in such a way that a student would get a grade similar to what they received at the advanced level examination. The second component was an informal interview to get the students opinion about the mathematics they were taught over the past four years. This also included interviews with some recent graduates who are working in the industry, to asses the usefulness of mathematics they learned at the engineering faculty. The quantitative survey revealed that the knowledge of mathematics go down during their stay at Faculty of Engineering. The qualitative survey revealed that the students found that the mathematics taught were too theoretical and preferred more applications to problems in engineering. Among others the major recommendation was to prepare the syllabus and curriculum with the help of staff in the Faculty of Engineering.

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