

C
377.7
VAS

i

**A STUDY OF THE IMPACT OF THE CURRENT
G.C.E (ADVANCED LEVEL) COMBINED MATHEMATICS
SYLLABUS ON THE FIRST YEAR MATHEMATICS COURSES
OFFERED BY THE FACULTIES OF SCIENCE AT THE
UNDERGRADUATE LEVEL**

A PROJECT REPORT PRESENTED BY

S.L.N. VASANTHI PRIYANKA

to the Board of Science Education of the
POSTGRADUATE INSTITUTE OF SCIENCE

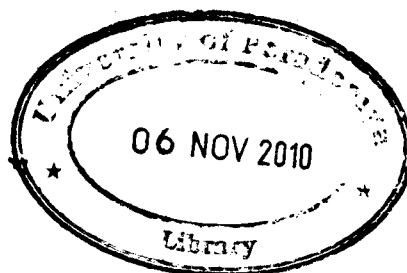
*in partial fulfillment of the requirement
for the award of the degree of*

MASTER OF SCIENCE IN SCIENCE EDUCATION

of the

**UNIVERSITY OF PERADENIYA
SRI LANKA**

2007



ABSTRACT
A STUDY OF THE IMPACT OF THE CURRENT G.C.E (ADVANCED LEVEL)
COMBINED MATHEMATICS SYLLABUS ON THE FIRST YEAR
MATHEMATICS COURSES OFFERED BY THE FACULTIES OF SCIENCE AT
THE UNDERGRADUATE LEVEL

S.L.N. Vasanthi Priyanka

C/Central College

Piliyandala

Sri Lanka

Combined Mathematics has been taught for nearly seven years now. There are various criticisms about the change of the syllabus from applied mathematics and pure mathematics to combined mathematics and higher mathematics. In this study we investigate the impact of the current G.C.E. (A/L) Combined Mathematics syllabus on the first year mathematics courses offered by the faculties of science at the undergraduate level.

Two samples, one comprising of university academics and the other comprising of university students were selected for this study. Questionnaires and documentary survey of G.C.E.(A/L) Combined Mathematics syllabus and the syllabi of first year mathematics courses in four selected universities were used to collect data and information required for the study.

According to the syllabi analysis of the G.C.E.(A/L) Combined Mathematics and the university first year mathematics courses of the selected universities, it is noted that the related basic concepts included in the Combined Mathematics syllabus that are useful for university first year mathematics courses are either not covered at all or not covered at a sufficient depth.

The lecturers highlighted the inadequacy of the curriculum content of Combined Mathematics for the necessary background knowledge and skills to follow their undergraduate courses.

By the statistical analysis of the grades of the Combined Mathematics and the Grade Point Averages of the first year university mathematics courses, it is revealed that, though there is an affect of Combined Mathematics on the university first year mathematics courses, students who have done well in Combined Mathematics do not necessarily perform better in first year mathematics courses. This suggests that there is a gap between Combined Mathematics and university first year mathematics courses.

Almost all students and lecturers have indicated that there is a significant gap between A/L Combined Mathematics and university first year mathematics courses. All the lecturers and most of the students recommended having a “Bridging Course” at the beginning of the university first year studies.

According to the findings of this study “a bridging course” is proposed, by carefully examining the university first year syllabi, Lecturers’ suggestions and students’ comments, for the first year university students to facilitate their studies in mathematics courses. This will provide them with the necessary additional knowledge for a smoother transition from G. C. E. (A/L) Combined Mathematics to first year university Mathematics Courses.