



## **Curriculum Description for Australian Matriculation (Tertiary Entrance Examinations)**

### **E504 APPLICABLE MATHEMATICS**

Applicable Mathematics and other Year 12 TES subjects in Mathematics must fulfil a variety of needs. They should be both a satisfying culmination of the work of earlier years and an adequate preparation for tertiary studies. To do this, these subjects must present mathematics as an organised body of useful knowledge and provide students with the skills and confidence necessary to apply this knowledge in practical situations.

Applicable Mathematics meets these demands by offering studies in a range of topics in modern mathematics. These topics have the potential for useful application and are within the capabilities of the more mathematically able students of this age group. Students graduating from secondary school with a knowledge of these areas will appreciate the power of mathematics to provide a systematic way of understanding and interpreting the world around them.

Applicable Mathematics develops some of the more useful mathematical techniques to complement the calculus learned in Introductory Calculus.

One major theme is the solution of equations. This includes matrix methods for solving systems of linear equations, graphical methods for solving non-linear equations, and graphical linear programming.

The other theme is statistics and probability. In the statistics section students will learn to draw conclusions from statistical data using simple numerical and graphical techniques. The section on probability provides the framework for future studies of statistical inference.

Applicable Mathematics is therefore invaluable for those proceeding to tertiary studies in any of the courses for which the mathematical techniques described above are important.

### **Recommended Background**

A desirable preparation is a strong background in algebra.

### **Examination Details**

The examination will consist of one written paper of three hours duration.

The written paper will consist of a mixture of short routine questions and more challenging non-routine questions reflecting the syllabus content. There will be no choice of questions.