MATHEMATICS

Unit 1&2
Mathematical Methods

COURSE OUTLINE:

This course is intended for students interested in pursuing Mathematics studies at a tertiary level and is required for many tertiary courses. For this purpose it would be best taken as part of a six-unit or eight-unit VCE Mathematics program. This course includes prerequisite material for Mathematical Methods Units 3 and 4.

The appropriate use of Computer Algebra System (CAS) technology to support and develop the teaching and learning of mathematics, and in related assessments, is to be incorporated throughout the unit.

AREAS OF STUDY:

- Functions and graphs
- Algebra
- Rates of change and calculus
- Probability and statistics

OUTCOMES:

On completion of these units, students should be able to:

1. Define and explain key concepts as specified in the content from each area of study and apply a range of related mathematical routines and procedures.

2. Apply mathematical processes in non-routine contexts to analyse and discuss these applications of mathematics.

3. Use technology to produce results and carry out analysis in situations requiring problem-solving, modelling or investigative techniques or approaches.

ASSESSMENT:

S or N based on the demonstrated achievement of the outcomes specified above. In addition a level of achievement, A+ to E or N, will be reported based on results obtained in assessment tasks which include assignments tests and an exam for each unit.

Unit 3&4
Mathematical Methods

COURSE OUTLINE:

This course is intended for students interested in pursuing Mathematics studies at a tertiary level and is a prerequisite for many Engineering/Science and Business/Economics degree courses. The course develops and extends Mathematical Methods Units 1 & 2.

The appropriate use of Computer Algebra System (CAS) technology to support and develop the teaching and learning of mathematics, and in related assessments, is to be incorporated throughout the unit.

AREAS OF STUDY:

- Functions and Graphs
- Algebra
- Calculus
- Probability and Statistics

OUTCOMES:

On completion of these units, students should be able to:

1. Define and explain key concepts as specified in the areas of study and to apply a range of related mathematical routines and procedures.

2. Apply mathematical processes in non-routine contexts and to analyse and discuss these applications of mathematics.

3. Select and appropriately use technology to develop mathematical ideas, produce results and carry out analysis in situations requiring problem-solving, modelling or investigative techniques or approaches.

ASSESSMENT:

S or N based on the demonstrated achievement of the outcomes specified above.

The student's level of achievement for Units 3 and 4 will be determined by:

School-Assessed Coursework for Unit 3:   20%

School-Assessed Coursework for Unit 4:   20%

Two end-of-year exams: Exam 1 20%

Exam 2 40%