



## MATHEMATICS A (MAA)

**QCE CREDIT POINTS:** 4 points

**AUTHORITY SUBJECT**

**USER PAY FEES:** Nil.

### SUBJECT INFORMATION

The Mathematics A course is designed to relate mathematics to the student’s social and physical environment. Success in this course will only be achieved through consistent effort and students who have attained a C- or lower in Year 10 Mathematics are advised to consider Prevocational Mathematics instead of Mathematics A.

*Please note: Mathematics A is incompatible with Mathematics C and Prevocational Mathematics.*

COURSE OVERVIEW	
SEMESTER 1	SEMESTER 3
<ul style="list-style-type: none"> <li>Unit 1 : Elements of applied geometry</li> <li>Unit 2 : Linking two and three dimensions</li> <li>Unit 3 : Managing money</li> <li>Unit 4 : Data collection and representation</li> <li>Unit 5 : Managing money</li> <li>Unit 6 : Linking two and three dimensions</li> <li>Unit 7 : Elements of applied geometry</li> <li>Unit 8 : Data analysis and exploration</li> </ul>	<ul style="list-style-type: none"> <li>Unit 1 : Managing money</li> <li>Unit 2 : Navigation</li> <li>Unit 3 : Exploring and understanding data</li> <li>Unit 4 : Navigation</li> </ul>
SEMESTER 2	SEMESTER 4
<ul style="list-style-type: none"> <li>Unit 9 : Data collection and presentation</li> <li>Unit 10 : Managing money</li> <li>Unit 11 : Elements of applied geometry</li> <li>Unit 12 : Data collection and presentation</li> </ul>	<ul style="list-style-type: none"> <li>Unit 5 : Operations research – queuing</li> <li>Unit 6 : Managing money</li> <li>Unit 7 : Operations research – networks</li> <li>Unit 8 : Exploring and understanding data</li> </ul>
<b>Assessment Techniques</b> <ul style="list-style-type: none"> <li>One problem solving assignment task per semester</li> <li>One 120 minute examination per term</li> </ul>	

## MATHEMATICS B (MAB)

**QCE CREDIT POINTS:** 4 points

**AUTHORITY SUBJECT**

**USER PAY FEES:** Nil.

### SUBJECT INFORMATION

The Mathematics B course is designed for students who, after high school, wish to study tertiary courses which require some mathematical expertise and as such a high level in advanced algebra, indices and surds is required e.g. engineering, medicine, vet science. For specific requirements consult pre requisites from Guidance Officers. It is recommended that only those students who have attained a grade of B or better in Foundation for Maths B should undertake this course.

**Please note: Mathematics B is incompatible with Prevocational Mathematics and Mathematics A.**

COURSE OVERVIEW	
SEMESTER 1	SEMESTER 3
<ul style="list-style-type: none"> <li>Unit 1 : Consolidation of algebra concepts</li> <li>Unit 2 : Exponential &amp; logarithmic functions &amp; applications 1</li> <li>Unit 3 : Periodic functions 1</li> <li>Unit 4 : Applied statistical analysis 1</li> <li>Unit 5 : Introduction to functions 1</li> <li>Unit 6 : Rates of change 1</li> </ul>	<ul style="list-style-type: none"> <li>Unit 14 : Introduction to integration 2</li> <li>Unit 15 : Applied statistical analysis 2</li> <li>Unit 16 : Periodic functions 4</li> <li>Unit 17: Exponential &amp; logarithmic functions &amp; applications 4</li> <li>Unit 18 : Integration 3</li> <li>Unit 19 : Optimisation 2</li> </ul>
SEMESTER 2	SEMESTER 4
<ul style="list-style-type: none"> <li>Unit 7: Exponential &amp; logarithmic functions &amp; applications 2</li> <li>Unit 8 : Periodic functions 2</li> <li>Unit 9 : Introduction to functions 2</li> <li>Unit 10 : Rates of change 2 / optimisation 1</li> </ul>	<ul style="list-style-type: none"> <li>Unit 20 : Applied statistical analysis 3</li> <li>Unit 21: Exponential &amp; logarithmic functions &amp; applications of integration 4</li> <li>Unit 22 : Periodic functions 5</li> </ul>
<b>Assessment Techniques</b> <ul style="list-style-type: none"> <li>One problem assignment task per semester</li> <li>One 120 minute examination per term</li> </ul>	



## MATHEMATICS C (MAC)

**QCE CREDIT POINTS:** 4 points

**AUTHORITY SUBJECT**

**USER PAY FEES:** Nil.

### SUBJECT INFORMATION

The Mathematics C course has an emphasis on Applied Mathematics. It is designed for students wishing to progress to mathematically based courses at Tertiary level. Students choosing Mathematics C must also choose Mathematics B. It is recommended that only those students who have attained a B or higher grade in Foundation for Mathematics B should undertake this course.

**Please note: Mathematics C is incompatible with Mathematics A and Prevocational Mathematics**

COURSE OVERVIEW	
SEMESTER 1	SEMESTER 3
<ul style="list-style-type: none"> <li>Unit 1 : Real and complex number systems 1</li> <li>Unit 2 : Structures and patterns 1</li> <li>Unit 3 : Introduction to groups</li> <li>Unit 4 : Matrices and applications 1</li> <li>Unit 5 : Vectors and applications 1</li> </ul>	<ul style="list-style-type: none"> <li>Unit 11 : Real and complex number systems 3</li> <li>Unit 12 : Structures and patterns 2</li> <li>Unit 13 : Dynamics 2</li> <li>Unit 14 : Matrices and applications 3</li> <li>Unit 15 : Calculus 1</li> </ul>
SEMESTER 2	SEMESTER 4
<ul style="list-style-type: none"> <li>Unit 6 : Matrices and applications 2</li> <li>Unit 7 : Dynamics 1</li> <li>Unit 8 : Real and complex number systems 2</li> <li>Unit 9 : Vectors and applications 2</li> <li>Unit 10 : Conics 1</li> </ul>	<ul style="list-style-type: none"> <li>Unit 16 : Vectors and applications 3</li> <li>Unit 17 : Calculus 2</li> <li>Unit 18 : Dynamics 3</li> <li>Unit 19 : Conics 2</li> </ul>
<b>Assessment Techniques</b> <ul style="list-style-type: none"> <li>One problem assignment task per semester</li> <li>One 120 minute examination per term</li> </ul>	

## PRE VOCATIONAL MATHEMATICS (PVM)

**QCE CREDIT POINTS:** 4 points

**AUTHORITY SUBJECT**

**USER PAY FEES:** Nil.

### SUBJECT INFORMATION

Prevocational Mathematics is an Authority Registered subject designed as an interesting and a practical alternative to 'traditional' mathematics courses. It is directed mainly at students who have experienced limited success with Mathematics up to the end of Year 10 but who would benefit from obtaining skills and knowledge relevant to the everyday needs of a consumer society.

**Please Note: Prevocational Mathematics is incompatible with Mathematic A, Mathematics B, and Mathematics C. Students will not undertake any vocational modules in this subject and thus will only receive a result on their year 12 certificate.**

COURSE OVERVIEW			
SEMESTER 1		SEMESTER 3	
<ul style="list-style-type: none"> <li>Numeracy Revision</li> <li>Timetables</li> <li>Networks</li> </ul>	<ul style="list-style-type: none"> <li>Map Reading</li> <li>Graphing</li> <li>Currency Exchange</li> </ul>	<ul style="list-style-type: none"> <li>Shopping</li> <li>Loans</li> <li>Taxation</li> </ul>	<ul style="list-style-type: none"> <li>Interest</li> <li>Leaving Home Maths</li> <li>Graphing</li> </ul>
SEMESTER 2		SEMESTER 4	
<ul style="list-style-type: none"> <li>Scale Drawing</li> <li>Length, Area, Volume</li> </ul>	<ul style="list-style-type: none"> <li>Measurement</li> <li>Trigonometry</li> </ul>	<ul style="list-style-type: none"> <li>Numeracy Review</li> <li>Probability / Gambling</li> </ul>	<ul style="list-style-type: none"> <li>Environment</li> <li>Graphing</li> </ul>
<b>Assessment Techniques</b> <ul style="list-style-type: none"> <li>One problem assignment task per term</li> <li>60 minute examination per term</li> </ul>			