Education & Communities

Bowral High School

Exceptional learning opportunities for all

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Mathematics Faculty

information for parents & students

click on the buttons on this page to quickly navigate to information about teachers, courses, assessment etc

this information was last updated in June 2018

your child's mathematics teacher can be contacted at school on 48612255

mathematics staff information

Mr Michael Murton

Relieving Head Teacher
Mathematics
10MAT.2M
11MAT
11MX
12MAG.2M

Ms Naomi Atkins

7MATR
7MATB
8MATL
9MAT.2A
10MAT.2A
11MAS.A

Ms Lisa Mauger

8MATO

Mr Shane Bleasdale

9 mat 1B
10 mat 2B
12MAT
12MX1
12MX2

Mrs Kim Kelly

Relieving Deputy Principal
9MAT.1K

Mr Chris Hayden

7MATA
8MATB
9MAT.2H
10MAT.3H
11MAS.H

Mr Rodney Van Bentum

7MATO
8MATA
9MAT.1V
10MAT.2V
11MAG.V and 12MAG.1V

Ms Alison Walker

7MATL
8MATR
9MAT.3W
10MAT.1W
12MAG.2W

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general faculty information

assessment

Student achievement is measured within individual classes and across whole year groups.

Teachers determine individual student progress in achieving outcomes on an ongoing basis, using a variety of tools including teacher observation, homework tasks, assignments, class participation, completion of set tasks and topic tests.

Major Semester Tests and Common Assignments assess student performance within their year group.

Year 7 - 9 have a major semester test in terms 2 and 4. The tests are held in approximately week 4 of these terms. Year 7 - 9 will also complete one assignment based assessment during the year. Year 10 have four common assessments.

Students will be notified two weeks before each task. This notification will be in writing and provides detail about the content and timing of the task.

These tasks, along with teacher recommendations, will also be used in determining Mathematics classes for the following year.

reporting

Student progress in mathematics is reported twice yearly using the school reports.

Parents are invited to speak to their child's teacher at official parent/ teacher evenings.

Parents can also speak to their child's teacher at any time by contacting the school on 4861 2255.

class placement

Information from the previous year is used to stream students into mathematics classes for years 9 and 10.

This allows students to work at a level suited to their pre-existing levels of knowledge and skill.

The class teacher will select activities to ensure all students are working toward achieving relevant outcomes and are extending their confidence and skills in mathematics.

If you have any concerns about your child's mathematics class placement please call Mr Murton on 4861 2255.

homework

Specific homework will be given at the classroom teacher's discretion. All students benefit from regular review of class work and from following a regular at home study program. The completion of homework is considered to play an important part in building student confidence and skill levels in Mathematics.

mathematics competitions

Students at Bowral High School have the opportunity to enter two mathematics competitions.

Australian Mathematics Competition
http://www.amt.edu.au/

NSW University ICAS Competition
http://www.eaa.unsw.edu.au/

calculators and other equipment for mathematics classes

Calculators and their effective use are an important part of High School Mathematics courses.

Students need to be able to complete calculations with and without calculators.

We strongly recommend you purchase a calculator through the Finance Office at Bowral High where we sell an approved calculator at cost price. ($20 with a geometry set)

This calculator is suitable for use through to Year 12 and beyond. Calculators purchased elsewhere may not have the required features.

Calculators may be used in some assessment tasks and it is expected that students will have their own calculator. Calculators are also required in NAPLAN and HSC exams.

Phones are not a suitable replacement for calculators at school.

Computers may be used in some mathematics lessons.

Geometry Equipment: All students are expected to have a set of geometrical instruments consisting of a pair of compasses, a protractor, a set square, a ruler and a pencil.

Work Books: We recommend students purchase a 5mm Grid Book for use in Mathematics. Loose-leaf folders are not permitted in junior Mathematics.

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year 7 course information

year 7 scope and sequence for 2018

Term 1 – 10 weeks

2	3	4	5	6	7	8	9	10	11
Computation with Numbers 10 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA3-4NA, MA3-5NA, MA3-6NA, MA4-4NA mental and written methods of arithmetic add, subtract, multiply & divide whole numbers (including negative integers) use order of operation, associative, communitive and distributive laws			**Introductory Algebra** 10 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-8NA generalise number properties to operate with algebraic expressions use letters to represent numbers recognise and use simple algebraic expressions simplify algebraic expressions using four operations				**Fractions, Decimals (& Percentages)** 10 lessons MA3-7NA, MA4-1WM, MA4-2WM, MA4-3WM, MA4-5NA compare fractions, mixed numerals by placing fractions on an integer number line add, subtract, multiply and divide fractions express one quantity as a fraction of another operate with decimals and percentages (% of quantities and % problems covered later)		

Term 2 – 10 weeks

1	2	3	4	5	6	7	8	9	10
Indices with Numerical Bases 9 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-9NA investigate index numbers (INDEX LAWS - introduced in year 8) represent whole numbers as products of primes find square roots and cube roots determine and apply divisibility tests			**NAPLAN** 3 lessons		**Angle Relationships & Properties of Geometric Figures** 10 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-17MG, MA4-18MG review types of angles classify triangles describe quadrilaterals identify line and rotational symmetry use angle sum of triangle and quadrilateral solve numerical problems using 2d shapes			**Time** 6 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-15MG solves problems involving 12 and 24-hour time within a single time zone and between time zones	

Term 3 – 10 weeks

1	2	3	4	5	6	7	8	9	10
Length & Perimeter 6 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-12MG calculate the perimeters of plane shapes (circumference will be covered in Year 8)		**Measurement Task** 4 lessons an in-class assessment of time & length measurement	**Percentages** 12 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-5NA convert between fractions, decimals & percentages find percentages of quantity calculate discounts investigate and calculate best buys				**Area of Quadrilaterals & Triangles, & Unit Conversion** 8 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-13MG convert between metric units of area establish and use formulas to find areas of triangles and special quadrilaterals (circle work is covered in Year 8) solve area problems		

Term 4 – 10 weeks

1	2	3	4	5	6	7	8	9	10
Linear Relationships 9 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-11NA locate and describe points on Cartesian plane using coordinates describe translations and reflections in an axis on the Cartesian plane			**Data Collection & Representation** 12 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-19SP collect, represent and interpret single sets of data use appropriate statistical displays this topic includes an in-class assessment task				**Simple Probability** 6 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-21SP determine sample space for single step experiments with equally likely outcomes determine probabilities of events in single step experiments use probability of complementary events to solve problems		**Activity Week**

Students in all year 7 mathematics classes follow this pattern of study.
The depth covered will vary from class to class and will be determined by individual class teachers.
This course follows the NSW version of the Australian Curriculum.

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year 8 course information

year 8 scope and sequence 2018

Term 1 – 10 weeks 2 days

1	2	3	4	5	6	7	8	9	10	11
Computation with Integers 5 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-4NA THIS TOPIC IS A REVIEW OF CONTENT FROM YEAR 7		**Fractions, Decimals & Percentages** 5 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-5NA THIS IS A REVIEW OF CONTENT FROM YEAR 7		**Algebraic Techniques 2** 9 lessons MA4-8NA, MA4-1WM, MA4-2WM, MA4-3WM Substitution, expand, factorise simple algebraic expressions.		**Circumference & Pi** 9 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-5NA, MA4-12MG Circumference calculation		**Angle Relationships, Parallel Lines** 9 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-18MG corresponding, alternate and co-interior; determine and justify that lines are parallel; solve numerical exercises		

Term 2 – 10 weeks

1	2	3	4	5	6	7	8	9	10
Area of Quadrilaterals & Circles 8 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-13MG Review area of quadrilaterals. Circle areas is main focus.			**Indices** 8 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-9NA Positive integers and zero indices, numerical bases		**Linear Relationships 2** 8 lessons MA4-1WM, MA4-2WM, MA4-3WM, MA4-11NA Graphing linear relationships, equations			**Volume** 8 lessons MA4-14MG, MA4-1WM, MA4-2WM, MA4-3WM Convert between metric units of volume, capacity. Solve volume and capacity problems.	

Term 3 – 9 weeks 4 days

1	2	3	4	5	6	7	8	9	10
Equations 9 lessons MA4-10NA, MA4-1WM, MA4-2WM, MA4-3WM Solve simple linear equations using algebraic techniques. Solve simple quadratic equations of the form $x = c^2$			**Pythagoras' Theorem** 7 lessons MA4-16MG, MA4-1WM, MA4-2WM, MA4-3WM Apply Pythagoras' theorem to find sides in right-angled triangles and solve problems.		**Rates & Ratios** 7 lessons MA4-7NA, MA4-1WM, MA4-2WM, MA4-3WM Apply ratios and rates to solve problems. Interpret and draw distance/time graphs.		**Measurement Assessment** 4 lessons	**Probability** 8 lessons MA4-21SP, MA4-1WM, MA4-2WM, MA4-3WM Probability of compound events, Venn diagrams.	

Term 4 – 10 weeks

1	2	3	4	5	6	7	8	9	10
Percentages – Financial Mathematics 10 lessons MA4-6NA, MA4-1WM, MA4-2WM, MA4-3WM Solve problems involving profit and loss				**Single Variable Data Analysis** 10 lessons MA4 1WM, MA4 2WM, MA4 3WM, MA4 20SP Analyses single sets of data using measures of location and range.			**Geometry & Congruency** 10 lessons MA4-17MG, MA4-1WM, MA4-2WM, MA4-3WM Identify congruent figures, identify congruent triangles using the four tests.		

Students in all year 8 mathematics classes follow this pattern of study.
The depth covered will vary from class to class and will be determined by individual class teachers.
The course follows the NSW version of the Australian Curriculum.

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year 9 course information

year 9 scope and sequence for 2018

Students in year 9 mathematics classes follow one of three broad patterns of study.

For each broad pattern the depth covered will vary from class to class and will be determined by individual class teachers.

In 2018 year 9 students will follow the NSW version of the Australian Curriculum.

Students who had not completed stage 4 outcomes by the end of year 8 will complete a stage 5.1 course during years 9 and 10.

In 2018 there are two parallel year 9 classes that are following this pattern of study. They are:

9MAT.1K
(Mrs Kelly)
9MAT.1V
(Mr Van Bentum)

Students who had mostly completed stage 4 outcomes by the end of year 8 will complete a stage 5.2 course during years 9 and 10.

In 2018 the year 9 classes that are following this pattern are:

9MAT.2A
(Miss Atkins)
9MAT.2B
(Mr Bleassdale)
9MAT.2H
(Mr Hayden)

Students who successfully completed stage 4 outcomes during year 8 will complete a stage 5.3 course during years 9 and 10.

In 2018 the year 9 class that is following this difficult and advanced pattern is:

9MAT.3W
(MS Walker)

The course followed by students during years 9 and 10 has implications for the mathematics course that students will successfully attempt in years 11 and 12.

Only students who complete stage 5.3 will be able to complete the difficult Mathematics Advanced course in year 11.

If you have any questions about mathematics classes, please contact Mr Murton on 4861 2255.

year 9 stage 5.1 scope & sequence

year 9 stage 5.2 scope & sequence

year 9 stage 5.3 scope & sequence

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year 10 course information

year 10 scope and sequence

Students in year 10 mathematics classes follow one of three broad patterns of study.

For each broad pattern the depth covered will vary from class to class and will be determined by individual class teachers.

In 2016 the year 10 courses follow the NSW version of the Australian Curriculum.

Students who were working to complete stage 4 and stage 5.1 outcomes during year 9 will continue to complete a stage 5.1 course during year 10. During term 4, students will be challenged to attempt harder 5.2 work.

In 2018 the year 10 classes that are following this pattern are10MAT.1B(Mr Bleasdale) and10MAT.1W(Ms Walker)

Students who were successfully working to complete stage 5.2 outcomes, or who found the stage 5.3 content too difficult, during year 9 will follow the stage 5.2 course during year 10. During term 4, students will be challenged to attempt some harder 5.3 work.

In 2018 the year 10 classes that are following this pattern are:10MAT.2A (Atkins) 10MAT.2B (Bleasdale) 10MAT.2M (Murton)

Students who were successfully working to complete stage 5.3 course during year 9 will continue to follow this course during year 10.

In 2018 the year 10 class that is following this pattern is: 10MAT.3H (Mr Hayden)

The course followed by students during years 9 and 10 has implications for the mathematics course that students will successfully attempt in years 11 and 12.

Only students who complete stage 5.3 will be able to complete the difficult Mathematics (advanced) course in year 11.

See the year 11 RoSA page for more information.

If you have any questions about mathematics classes, please contact Mr Murton on 4861 2255.

year 10 stage 5.1 scope & sequence

year 10 stage 5.2 scope & sequence

year 10 stage 5.3 scope & sequence

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year 11 scope and sequence

The mathematics faculty believe it is important for students to continue to study mathematics during years 11 and 12.

Mathematics provides students with skills that are relevant in 21st century living and that are useful in the majority of occupations.

Students in all year 11 mathematics classes follow Board Developed Courses in Mathematics.

There are three levels of difficulty in the mathematics courses offered at Bowral High School.

year 11 course information

Students who are completing 'humanities' courses like Legal Studies, Modern History, Biology, Visual Arts and Music and who do not intend to complete Mathematics or Science courses at university; or those students who intend to complete further education at TAFE will find that the PRELIMINARY MATHEMATICS Standard course is suited to their needs. The content of the course is also engaging for most students.

In 2018 the year 11 classes that are completing PRELIMINARY MATHEMATICS Standard are:

11MAS.V
(Mr Van Bentum)
11MAS.A
(Miss Atkins)
11MAS.H
(Mr Hayden)
11MAS.B
(Mr Bleasdale)

preliminary mathematics Standard

* In year 12 the Preliminary Mathematics Standard course splits to follow two distinct pathways.

The HSC Standard 2 course is a Board DEVELOPED course that is formally examined at the HSC and contributes to units that can be counted in the ATAR.

The HSC Standard 1 course is a Board ENDORSED course - the examination at the HSC is optional and contributes to an ATAR. TThe Standard 1 course is recomemded for students who are struggling and need to develop their mathematical skills to allow them to complete further education at TAFE or who are seeking employment.

Students must consider carefully their pattern of study to ensure they are meeting requirements for ATAR, HSC or RoSA.

Students who completed stage 5.3 in year 10 and who enjoy algebra should consider the PRELIMINARY MATHEMATICS course. This course is a minimum standard for most science courses at university.

Students who begin this course do have the option of changing down to Mathematics Standard.

In 2018 the year 11 classes that are following this pattern are:

11MAT
(Mr Murton)

preliminary mathematics

Students who achieved highly in stage 5.3 outcomes and who are completing subjects like Physics, Engineering Studies and who are also completing Preliminary Mathematics should consider the Extension 1 course.

This course is intended for those students who are most capable in mathematics and who would like to complete engineering or science at university.

In 2018 the year 11 class that is following this pattern is:

11MX
(Mr Murton)

preliminary mathematics extension

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year 12 scope and sequence

Following successful completion of their preliminary mathematics course most students elect to continue with mathematics into the HSC.

HSC students at Bowral High School can choose to follow mathematics at five broad levels, including Mathematics General 1 and Mathematics Extension 2.

year 12 course information

Students who need to develop their mathematics skills to provide work readiness skills are encouraged to complete HSC MATHEMATICS GENERAL 1.

This is a BOARD ENDORSED COURSE and has implications for requirements for HSC. It does not count in the minimum 6 units of board developed courses. However most students are not affected by this issue.

In 2018 the year 12 class that is completing HSC MATHEMATICS GENERAL 1 is:

12MAG.1V
(Mr Van Bentum)

GENERAL 1 scope & sequence

Students who completed Preliminary Mathematics General or Preliminary Mathematics are able to complete HSC MATHEMATICS GENERAL 2.

In 2018 the year 12 classes that are following this course are:

12MAG.2M
(Mr Murton)
12MAG.2W
(Ms Walker)

GENERAL 2 scope & sequence

Students who completed Preliminary Mathematics are able to continue with HSC MATHEMATICS.

In 2018 the year 12 class that is following this pattern is:

12 mat
(Mr Bleasdale)

mathematics scope & sequence

Students who completed Preliminary Mathematics Extension are able to continue with HSC MATHEMATICS EXTENSION 1.

In 2018 the year 12 class that is following this pattern is:

12 max1
(Mr Bleasdale)

mathematics extension 1 scope & sequence

Preliminary Extension 1 students have the option of HSC EXTENSION 2 - this course is only suitable for VERYcapable and dedicated students.

12MAX2
(Mr Bleasdale)

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year 9, stage 5.1, scope and sequence - 2018

year 9
stage 5.1

Stage 5.1 Term 1 – 10 weeks – option of short or combined topics

2	3	4	5	6	7	8	9	10	11
1a Wages 6 lessons	**2a Using variables** 6 lessons	**3a Review basic areas** 6 lessons	**3b Numbers of any magnitude** 3 lessons	**1b Commission** 3 lessons	**2b Patterns & substitution** 6 lessons	**1c Taxation** 4 lessons	**3c Composite areas** 6 lessons		
1 Financial Mathematics 13 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA5.1-6NA solve problems involving earning money; common assessment task			**2 Algebraic Techniques** 12 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA4-8NA using variables; simplify algebraic expressions				**3 Area** 15 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA5.1-8MG, MA5.1-9MG composite areas		

Stage 5.1 Term 2 – 10 weeks – option of short or combined topics

1	2	3	4	5	6	7	8	9	10
4a Triangles & quadrilaterals 5 lessons	**5a Ratio** 4 lessons	**NAPLAN** 4 lessons	**6a Index laws** 5 lessons	**5b Rates** 5 lessons	**4b Angles** 5 lessons	**5c Graphs** 5 lessons	**6b Scientific Notation** 5 lessons		
4 Properties of Geometric Figures 10 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA4-17MG, MA4-18MG classify triangles using side and angle properties; symmetry; use angle properties to solve problems		**NAPLAN** 4 lessons	**5 Ratio & Rates** 14 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA4-7NA, MA5.1-9MG solve simple ratio problems; solve rates problems; investigates graphs using real data - rates of change			**6 Indices** 10 lessons MA5.1-1WM, MA5.1-3WM, MA5.1-5NA, MA5.1-6MG index notation; algebraic products and quotients; use index laws; scientific notation			

Stage 5.1 Term 3 – 10 weeks – option of short or combined topics

1	2	3	4	5	6	7	8	9	10
7a Two Step Linear 5 lessons	**8a Units & Prisms** 6 lessons	**7b Quadratics** 4 lessons	**9a Pythagoras** 5 lessons	**8b Cylinders** 7 lessons		**9b Irrational No.** 4 lessons	**7c Harder Equ** 4 lessons	**9c Similar Triangle** 4 lessons	
7 Equations 13 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA4-10NA solve simple linear equations; verify solutions using substitution; solve simple quadratic equations			**8 Volume** 13 lessons MA5.1-1WM, MA5.1-2WM, MA4-14MG draw prisms and solids made from prisms; units of volume; use formula to find volumes of prisms; calculate volumes of cylinders			**9 Right Triangles** 13 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA4-16MG solve simple problems involving right triangles; investigate ideas of irrational numbers			

Stage 5.1 Term 4 – 10 weeks – option of short or combined topics

1	2	3	4	5	6	7	8	9	10
10a Points & Transformations 6 lessons	**11a Mean, Mode, Median & Range** 6 lessons		**12a Sample Space, Relative Frequency** 6 lessons	**10b Linear Relations on Cartesian Plane** 6 lessons		**11b Samples & More Analysis** 6 lessons	**12b Complementary Events** 6 lessons		**Activity Week**
10 Linear Relationships 12 lessons MA5.1-1WM, MA5.1-3WM, MA4-11NA translations, reflections and rotations on Cartesian plane; plot linear relationships; solve equations using graphical techniques			**11 Single Variable Data Analysis** 12 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA4-20SP mean, mode, median and range; investigate effect of individual values including outliers; describe and interpret data using mean, median and range; samples of populations			**12 Probability** 12 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA4-21SP sample space for single step experiments; determine probabilities of events; complementary events			

Students in all year 9, stage 5.1, mathematics classes follow this pattern of study.

More capable students will also be given the opportunity to extend themselves with stage 5.2 outcomes.

The depth covered will vary from class to class and will be determined by individual class teachers.

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year 9, stage 5.2, scope and sequence - 2018

Stage 5.2 Term 1 – 10 weeks

2	3	4	5	6	7	8	9	10	11
1 Financial Mathematics 16 lessons MA5.2-1WM, MA5.2-2WM, MA5.2-3WM, MA5.1-6NA stage 5.1 financial mathematics; common assessment task				**2 Ratio & Rates** 12 lessons MA5.2 1WM, MA5.2 2WM, MA5.2 5NA, MA5.1 9MG direct and indirect proportion; works with direction proportion to solve problems			**3 Area & Surface Area** 12 lessons MA5.2 1WM, MA5.2 2WM, MA5.2 3WM, MA5.1 8MG, MA5.1 9MG composite shapes and rectangular and triangular prisms		

Stage 5.2 Term 2 – 10 weeks

1	2	3	4	5	6	7	8	9	10
4 Algebraic Techniques 12 lessons MA5.2 1WM, MA5.2 2WM, MA5.2 6NA review stage 4 algebraic techniques; algebraic fractions expansion; common factor factorisation; 5.2 students will expand and factorise binomials during year 10			**NAPLAN** 4 lessons	**5 Volume** 10 lessons MA5.2 1WM, MA5.2 2WM, MA5.2 12MG review stage 4 volume; extend to composite solids involving right prisms and cylinders; 5.2 students will solve volume problems involving a range of prisms, cylinders and composite solids during year 10			**6 Indices** 12 lessons MA5.2 1WM, MA5.2 3WM, MA5.1 5NA, MA5.1 9MG, MA5.2 7NA small and large numbers; scientific notation; develop and use index laws for numerical and algebraic bases		

Stage 5.2 Term 3 – 10 weeks

1	2	3	4	5	6	7	8	9	10
7 Equations 13 lessons MA5.2 1WM, MA5.2 2WM, MA5.2 3WM, MA5.2 8NA linear and simple quadratic equations; 5.2 students will complete content involving quadratic factorisation, linear inequalities and linear simultaneous equations during year 10			**8 Linear Relationships** 13 lessons MA5.2 1WM, MA5.2 3WM, MA5.1 6NA midpoint, gradient, length; graphs linear relationships; 5.2 students will develop understanding of gradient-intercept form of straight lines in year 10				**9 Geometric Figures** 13 lessons MA5.2 1WM, MA5.2 2WM, MA5.2 3WM, MA5.1 11MG prove and justify results; similarity; scale drawings; 5.2 students will extend knowledge to include congruency during year 10		

Stage 5.2 Term 4 – 10 weeks

1	2	3	4	5	6	7	8	9	10
10 Right Angle Triangles 12 lessons MA5.2-1WM, MA5.2-2WM, MA5.1-10MG extension of similarity of triangles; problems include elevation and depression; 5.2 students will extend trigonometry understanding to bearings during year 10			**11 Single Variable Data Analysis** 12 lessons MA5.2-1WM, MA5.2-2WM, MA5.2-3WM, MA5.1-12SP compare data sets; evaluate statistical claims made in the media; 5.2 students will extend statistical knowledge to include box plots during year 10			**12 Probability** 12 lessons MA5.2-1WM, MA5.2-2WM, MA5.2-3WM, MA5.1-13SP relative frequency to estimate probability; compound events; Venn diagrams; 5.2 students will work with multi-step chance experiments during year 10		**Activity Week**

Students in all year 9, stage 5.2, mathematics classes follow this pattern of study.
More capable students will also be given the opportunity to extend themselves with stage 5.3 outcomes.
The depth covered will vary from class to class and will be determined by individual class teachers.

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year 9, stage 5.3, scope and sequence - 2018

year 9
stage 5.3

Stage 5.3 Term 1 – 10 weeks 2 days

2	3	4	5	6	7	8	9	10	11
1 Financial Mathematics 16 lessons MA5.3-1WM, MA5.3-2WM, MA5.3-3WM, MA5.1-4NA, MA5.2-4NA earning, spending and investing; compound interest; 5.3 students complete all Financial Mathematics content during year 9				**2 Ratio & Rates** 12 lessons MA5.3-1WM, MA5.3-2WM, MA5.3-3WM, MA5.1-9MG, MA5.2-5NA, MA5.3-4NA small and large numbers; direct and indirect proportion; includes graphs of physical phenomena; problems should include data and time units			**3 Area & Surface Area** 12 lessons MA5.3-1WM, MA5.3-2WM, MA5.3-3WM, MA5.1-8MG, MA5.2-11MG, MA5.1-9MG composite areas; surface area of composite solids (right prisms and cylinders); 5.3 students will apply formula to find surface area of right pyramids, right cones, spheres and related composite solids in year 10		

Stage 5.3 Term 2 – 9 weeks 3 days

1	2	3	4	5	6	7	8	9	10
4 Volume 6 lessons MA5.3-1WM, MA5.3-2WM, MA5.3-3WM, MA5.2-12MG volume of solids including composite solids with right prisms and cylinders	**NAPLAN** 6 lessons time for practice & implementation of NAPLAN testing		**5 Algebraic Techniques** 13 lessons MA5.3-1WM, MA5.3-2WM, MA5.2-6NA algebraic fractions; expansion; factorisation, including monic quadratic expressions; 5.3 students will extend fluency with algebraic expressions during year 10			**6 Indices & Surds** 13 lessons MA5.3-1WM, MA5.3-2WM, MA5.3-3WM, MA5.1-5NA, MA5.1-9MG, MA5.2-7NA, MA5.3-6NA small and large numbers - scientific notation; index laws involving integer indices; uses index laws, simplifies surds (up to rationalising simple binomial denominators)			

Stage 5.3 Term 3 – 9 weeks 4 days

1	2	3	4	5	6	7	8	9	10
7 Equations 13 lessons MA5.3-1WM, MA5.3-2WM, MA5.3-3WM, MA5.2-8NA linear and simple quadratic equations; linear inequalities; simultaneous equations - algebraically and graphically; solve word problems using equations; 5.3 students will develop fluency with equations during year 10			**8 Linear Relationships** 13 lessons MA5.3-1WM, MA5.3-2WM, MA5.3-3WM, MA5.1-6NA, MA5.2-9NA midpoint, gradient, length; graphs linear relationships; uses gradient-intercept form to interpret relationships; 5.3 students will extend linear relations fluency in year 10 with application of formula for midpoint, gradient and distance and with the use of standard forms of straight line equations			**9 Geometric Figures** 13 lessons MA5.3-1WM, MA5.3-2WM, MA5.3-3WM, MA5.1-11MG, MA5.2-14MG use similar figures; scale drawings; angle sum of polygons; congruence proofs; 5.3 students extend proofs to similarity and triangle and quadrilateral properties during year 10		

Stage 5.3 Term 4 – 10 weeks

1	2	3	4	5	6	7	8	9	10
10 Right Angle Triangles 12 lessons MA5.3-1WM, MA5.3-2WM, MA5.3-3WM, MA5.1-10MG, MA5.2-13MG trigonometry to solve elevation and depression problems; trigonometry to solve problems involving bearings; 5.3 students will extend trigonometry understanding to include non-right triangles and 3D problems during year 10			**11 Single Variable Data Analysis** 12 lessons MA5.3-1WM, MA5.3-2WM, MA5.3-3WM, MA5.1-12SP, MA5.2-15SP compare data sets; evaluate statistical claims made in media quartiles, box plots; evaluates sources of data; 5.3 students will develop statistical understanding to include standard deviation during year 10			**12 Probability** 12 lessons MA5.3-1WM, MA5.3-2WM, MA5.3-3WM, MA5.1-13SP, MA5.2-17SP relative frequencies to estimate probabilities; compound events multi-step probabilities; 5.3 students complete all probability content during year 9		**13 Polynomials** 4 lessons MA5.3-1WM, MA5.3-2WM, MA5.3-10NA intro to polynomials

Students in all year 9, stage 5.3, mathematics classes follow this pattern of study.
More capable students will also be given the opportunity to extend themselves to allow an easier transition to Extension Mathematics courses in stage 6
The depth covered will vary from class to class and will be determined by individual class teachers.

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year 10

year 10, stage 5.1, scope and sequence - 2018

stage 5.1

Stage 5.1 Term 1 – 10 weeks – option of short or combined topics

2	3	4	5	6	7	8	9	10	11
1a Simplify terms 3 lessons	**2a Review percent** 3 lessons	**3a Review area** 3 lessons	**1b Substitution** 3 lessons	**2b Simple interest** 4 lessons	**4a Enlargement** 3 lessons	**2c Compound interest** 4 lessons	**3b Surface area prisms** 4 lessons	**1c Expand & factorise** 4 lessons	**4b Ratio & scale factor** 4 lessons
1 Algebraic techniques 10 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA5.1-4NA conclusion of 5.1 financial mathematics content			**2 Financial mathematics** 11 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA5.1-8MG conclusion of 5.1 surface area content			**3 Area & surface area** 7 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA4-8NA stage 4 algebraic techniques review		**4 Geometric figures** 7 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-3WM, MA5.1-11MG 5.1 similar figures content	

Stage 5.1 Term 2 – 10 weeks – option of short or combined topics

1	2	3	4	5	6	7	8	9	10
5a Linear equations 4 lessons	**6a Similarity – trig ratios** 6 lessons		**7a Midpoint, gradient, distance** 5 lessons	**8a Prisms** 3 lessons	**5b Quadratics** 3 lessons	**6b Elevation & depression** 5 lessons	**7b Equations of lines** 5 lessons		**8bCylinders** 4 lessons
5 Equations 7 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-8WM, MA4-16NA review of stage 4 content			**6 Trigonometry** 10 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-8WM, MA5.1-10MG 5.1 trigonometry content			**7 Linear relationships** 10 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-8WM, MA5.1-6NA 5.1 linear relations content		**8 Volume** 7 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-9WM, MA4-14MG review of stage 4 volume content	

Stage 5.1 Term 3 – 10 weeks – option of short or combined topics

1	2	3	4	5	6	7	8	9	10
9a Collecting 3 lessons	**10a Relative frequency** 5 lessons	**11a Graphs** 5 lessons	**9b Displaying** 4 lessons	**10b Theoretical probability** 3 lessons	**9c Analysing** 3 lessons	**10c Venn & other diagrams** 4 lessons	**11b Equation & shape** 4 lessons	**9d Assessment task** 4 lessons	
9 Data 14 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-8WM, MA5.1-12SP 5.1 data content			**10 Probability** 12 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-8WM, MA5.1-13SP 5.1 probability content - extend as appropriate for class				**11 Non-linear relationships** 9 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-8WM, MA5.1-9NA 5.1 non-linear relations content		

Stage 5.1 Term 4 – 10 weeks - option of short or combined topics

1	2	3	4	5	6	7	8	9	10
12a Review Interest 3 lessons	**13a Review Trigonometry** 3 lessons	**14a Parabola** 4 lessons	**12b Compound formula** 4 lessons	**13b Elevation & depression** 4 lessons	**14b Exponentials** 3 lessons	**13c Bearings** 4 lessons	**12c Compound interest problems** 4 lessons	**14c Circles** 3 lessons	**Activity week**
12 Financial maths 11 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-8WM, MA5.2-8NA extension into 5.2 financial mathematics content			**13 Trigonometry** 11 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-8WM, MA5.2-13MG extension into 5.2 trigonometry			**14 Non-linear relationships** 10 lessons MA5.1-1WM, MA5.1-2WM, MA5.1-8WM, MA5.2-10NA extension into 5.2 non-linear relationships			

Students in all year 10, stage 5.1, mathematics classes follow this pattern of study.
More capable students will also be given the opportunity to extend themselves with stage 5.2 outcomes.
The depth covered will vary from class to class and will be determined by individual class teachers.

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year 10
stage 5.2

year 10, stage 5.2, scope and sequence - 2018

Stage 5.2 Term 1 – 10 weeks

2 3 4	5 6	7 8 9	10 11
1 Financial mathematics 9 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.2-4NA 5.2 financial mathematics content	**2 Area & surface area** 9 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.2-11MG 5.2 surface area content	**3 Algebraic techniques** 10 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.2-6NA conclusion of 5.2 algebraic techniques	**4 Properties of geometric figures** 7 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.2-14MG 5.2 properties of geometric figures content

Stage 5.2 Term 2 – 10 weeks

1 2 3	4 5	6 7 8	9 10
5 Equations 11 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.2-8NA conclusion of 5.2 equation content	**6 Trigonometry** 8 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.2-13MG 5.2 trigonometry content	**7 Linear relationships** 9 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.2-9NA 5.2 linear relations content	**8 Volume** 7 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.2-12MG conclusion of 5.2 volume content

Stage 5.2 Term 3 – 10 weeks

1 2 3	4 5	6 7 8	9 10
9 Trigonometry B 12 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.2-15SP, MAS.2-16SP extension into 5.3 - non-right triangle trigonometry	**10 Non-linear relationships** 8 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.2-17SP 5.1 and 5.2 non-linear relations content	**11 Probability** 7 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.1-7NA, MAS.2-10NA 5.2 probability content	**12 Algebraic techniques B** 8 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.3-5NA extension into 5.3 algebraic techniques

Stage 5.2 Term 4 – 10 weeks

1 2 3	4 5	6 7	8 9	10
13 Data 10 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.3-15MG 5.2 single and bivariant data content	**14 Equations B** 8 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.3-7NA extension into 5.3 equations	**15 Linear relationships B** 7 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.3-8NA extension into 5.3 linear relations	**16 Surds** 7 lessons MAS.2-1WM, MAS.2-2WM, MAS.2-3WM, MAS.3-6NA surds and indices	**Activity week**

Students in all year 10, stage 5.2, mathematics classes follow this pattern of study.
More capable students will also be given the opportunity to extend themselves with stage 5.3 outcomes.
The depth covered will vary from class to class and will be determined by individual class teachers.

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year 10
stage 5.3

year 10, stage 5.3, scope and sequence - 2018

Stage 5.3 Term 1 – 10 weeks

2	3	4	5	6	7	8	9	10	11
1 Algebraic techniques 13 lessons MAS.3-1WM, MAS.3-2WM, MAS.3-3WM, MAS.3-5NA Fractions; products & factors				**2 Area & surface area** 11 lessons MAS.3-1WM, MAS.3-2WM, MAS.3-3WM, MAS.3-13MG Pyramids; cones; spheres			**3 Equations** 11 lessons MAS.3-1WM, MAS.3-2WM, MAS.3-3WM, MAS.3-7NA complex linear; quadratic formula; cubic; simultaneous equations		

Stage 5.3 Term 2 – 10 weeks

1	2	3	4	5	6	7	8	9	10
4 Volume 7 lessons MAS.3-1WM, MAS.3-2WM, MAS.3-3WM, MAS.3-14MG Pyramids; cones; spheres		**5 Trigonometry** 12 lessons MAS.3-1WM, MAS.3-2WM, MAS.3-3WM, MAS.3-15MG 3D problems; exact values; sine, cosine & area rules			**6 Linear relationships** 7 lessons MAS.3-1WM, MAS.3-2WM, MAS.3-3WM, MAS.3-8NA midpoint, gradient and length formulas; parallel & perpendicular lines		**7 Properties of geometric figures** 9 lessons MAS.3-1WM, MAS.3-2WM, MAS.3-3WM, MAS.3-16MG congruency & similarity; special figures		

Stage 5.3 Term 3 – 10 weeks

1	2	3	4	5	6	7	8	9	10
8 Non-linear relationships 11 lessons MAS.3-1WM, MAS.3-2WM, MAS.3-3WM, MAS.3-7NA, MAS.2-10NA, MAS.3-9NA parabola, exponential and circles; transformations due to equation changes			**9 Data** 12 lessons MAS.3-1WM, MAS.3-2WM, MAS.3-3WM, MAS.3-18SP, MAS.2-16SP, MAS.3-19SP mean, SD; bivariate data; line of fit				**10 Polynomials** 12 lessons MAS.3-1WM, MAS.3-2WM, MAS.3-3WM, MAS.3-10NA Factor and remainder theorems; graphs; roots		

Stage 5.3 Term 4 – 10 weeks

1	2	3	4	5	6	7	8	9	10
11 Logarithms 11 lessons MAS.3-1WM, MAS.3-2WM, MAS.3-3WM, MAS.3-11NA log laws; exponential equations			**12 Functions** 11 lessons MAS.3-1WM, MAS.3-2WM, MAS.3-3WM, MAS.3-12NA Functions; notation; graphs			**13 Circle geometry** 10 lessons MAS.3-1WM, MAS.3-2WM, MAS.3-3WM, MAS.3-17MG angle & chord properties; tangent & secant properties		**Activity week**	

Students in all year 10, stage 5.3, mathematics classes follow this pattern of study.
More capable students will also be given the opportunity to extend themselves to allow an easier transition to Extension Mathematics courses in stage 6.
The depth covered will vary from class to class and will be determined by individual class teachers.

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preliminary mathematics Standard, scope and sequence - 2018

Year 11 Term 1 2018

Week	Week 1 | Week 2 | Week 3	Week 4 | Week 5 | Week 6	Week 7 | Week 8 | (Task 1)	Week 9 | Week 10 |
Unit	MS-F1 Money Matters (F1.2): Earning and managing money	MS-A1: Formulae and Equations	MS-M1 Applications of Measurement (M1.1): Practicalities of measurement	MS-A2: Linear Relationships

Year 11 Term 2 2018

Week	Week 1 | Week 2 | Week 3	Week 4 | Week 5	Week 6 | Week 7 (Task 2)	Week 8 | Week 9 | Week 10
Unit	MS-S1 Data Analysis (S1.1): Classifying and representing data (grouped and ungrouped)	MS-S1 Data Analysis (S1.2): Exploring and describing data arising from a single continuous variable	MS-F1 Money Matters (F1.1): Interest and depreciation	MS-M1 Applications of Measurement (M1.2): Perimeter, area and volume

Year 11 Term 3 2018

Week	Week 1 | Week 2	Week 3 | Week 4	Week 5 | Week 6	Week 7 | Week 8 | Week 9 | Task3
Unit	MS-M1 Applications of Measurement (M1.3): Units of energy and mass	MS-S2 Relative Frequency and Probability	MS-M2 Working with Time	MS-F1 Money Matters (F1.3) Budgeting and household expenses

Students in all year 11 Preliminary Mathematics Standard classes follow this pattern of study.

At the end of the Preliminary course students need to decide whether to follow the HSC Mathematics Standard 2 course or the Standard 1 course.

The Standard 2 course is a full Board Developed Course and counts fully toward the requirements for both ATAR and HSC.

The Standard 1 course is a new Board Developed Course and students must be aware of the consequences of choosing Standard 1 as part of their pattern of study.

See the HSC information page for more detail, or ring Mr Murton on 4861 2255.

During term 3 the differences between the courses will be explained to students so they can make informed choices.

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preliminary mathematics

preliminary mathematics, scope and sequence - 2018

Term 1 – 10 weeks

2	3	4	5	6	7	8	9	10	11
1 Basic Arithmetic & Algebra 16 lessons 1.1 - 1.4				2 Real Functions & Geometrical Representation 16 lessons 4.1 - 4.4				3 Linear Functions and Lines 16 lessons (will be completed in term 2) 6.1 - 6.5, 6.7	

Term 2 – 10 weeks

1	2	3	4	5	6	7	8	9	10
Linear Functions & Lines completion		4 Plane Geometry 16 lessons 2.1 - 2.4				5 Trigonometric Ratios 16 lessons 5.1 -5.5, 5.6 - 5.9			

Term 3 – 10 weeks

1	2	3	4	5	6	7	8	9	10
6 The Quadratic Polynomials and Parabola 16 lessons 9.1 - 9.5				7 The Tangent to a Curve and the Derivative of a Function 16 lessons 8.1 - 8.9				Final Exam 8 lessons	

Students in all Preliminary Mathematics classes follow this pattern of study.

Students who are completing Mathematics Extension 1 must also satisfactorily complete all of the Mathematics work.

At the end of the Preliminary Mathematics course students generally continue onto the HSC Mathematics course.

Some students may however elect to change courses to the HSC Standard 2 course. These students must be aware that they will need to be sure they understand all Preliminary work from the Standard course.

Please speak to Mr Murton on 4861 2255 if you have any questions.

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preliminary mathematics extension 1

preliminary mathematics extension 1, scope and sequence - 2018

Term 1 – 10 weeks 2 days

2	3	4	5	6	7	8	9	10	11
1 Basic Arithmetic & Algebra 1.1 - 1.4				2 Real Functions & Geometrical Representation 4.1 - 4.4				3 Linear Functions and Lines 6.1 - 6.5, 6.7	
1 Polynomials 6 extension lessons 16.1 - 16.3				**2 Harder Basic Arithmetic & Algebra** 4 extension lessons 1.1 - 1.4, 1.4E			**3 Harder Real Functions & Geom. Rep.** 4 extension lessons 4.1 - 4.4		**4 Linear Functions & Lines**

Term 2 – 9 weeks 3 days

1	2	3	4	5	6	7	8	9	10
Linear Functions & Lines		4 Plane Geometry 2.1 - 2.4				5 Trigonometric Ratios 5.1, 5.5, 5.6 - 5.9			
4 Linear Functions & Lines 4 extension lessons 6.1 – 6.6, 6.7E		**5 Permutations & Combinations** 3 extension lessons 18.1		**6 Harder Plane Geometry, Circle Geometry** 7 extension lessons 2.1 – 2.4, 2.6 – 2.10E					**7 Harder Trig Ratios** 2 extension lessons 5.1 – 5.5

Term 3 – 9 weeks 4 days

1	2	3	4	5	6	7	8	9	10
6 The Quadratic Polynomial and Parabola 9.1 - 9.5				7 The Tangent to a Curve and the Derivative of a Function 8.1 - 8.9					Final Exam
7 Harder Trigonometric Ratios & Linear Functions & Lines 4 extension lessons 5.6E - 5.9E & 6.6E		**8 Harder Quad & Parabola** 2 extension lessons 9.1 – 9.6		**9 Harder Tangent to a Curve and the Derivative of a Function & Parametric representation & Calculus** 6 extension lessons 8.1 – 8.9 & 9.6E					**Final Exam & Review**

Students who are completing Mathematics Extension 1 must also satisfactorily complete all of the Mathematics work.

At the end of the Preliminary Mathematics Extension 1 course students generally continue onto the HSC Mathematics Extension 1 course.

Some students may also choose to complete the difficult HSC Mathematics Extension 2 course.

Some students may however elect to change courses to the HSC Mathematic course or even to HSC Mathematics Standard 2 course.

Student who change to the Standard 2 course must be aware that they will need to be sure they understand all work from the Preliminary Mathematics Standard course.

Please speak to Mr Murton on 4861 2255 if you have any questions.

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HSC mathematics general 2

hsc mathematics general 2, scope and sequence - 2018

Term 4 – 2016 – 10 weeks – 8 LESSONS PER CYCLE

1 2 3	4 5 6	7 8 9 10
1 Financial Mathematics **FM4** Credit and Borrowing **FM5** Annuities and Loan Repayments 3 weeks MG2H-1, MG2H-3, MG2H-6, MG2H-9, MG2H-10	**2 Algebra and Modelling** **AM3** Further algebraic skills and techniques **AM4** Modelling linear relationships 3 weeks MG2H-3, MG2H-9, MG2H-10	**3 Measurement** **MM4** Further applications of area and volume 4 weeks MG2H-4, MG2H-5, MG2H-10

Term 1 – 2017 – 10 weeks – 8 LESSONS PER CYCLE

2 3 4	5 6 7	8 9 10 11
4 Data and Statistics **DS4** Interpreting sets of data 12 lessons MG2H-1, MG2H-2, MG2H-7, MG2H-8, MG2H-9, MG2H-10	**5 Measurement** **MM5** Applications of trigonometry 12 lessons MG2H-4, MG2H-5, MG2H-10	**6 Focus Study: Mathematics and Resources** **FSRe1** Water availability and usage **FSRe2** Dams, land and catchment areas 16 lessons MG2H-1, MG2H-2, MG2H-3, MG2H-4, MG2H-5, MG2H-7, MG2H-9, MG2H-10

Term 2 – 2017 – 10 weeks – 8 LESSONS PER CYCLE

1 2 3	4 5 6 7	8 9 10
7 Probability **PB2** Multistage events and applications of probability 12 lessons MG2H-1, MG2H-2, MG2H-7, MG2H-8, MG2H-9, MG2H-10	**8 Focus Study: Mathematics and Health** **FSHe1** Body measurements **FSHe2** Medication **FSHe3** Life expectancy 14 lessons MG2H-1, MG2H-2, MG2H-3, MG2H-5, MG2H-7, MG2H-9, MG2H-10	**9 Measurement** **MM6** Spherical geometry 14 lessons MG2H-4, MG2H-5, MG2H-10

Term 3 – 2017 – 10 weeks – 8 LESSONS PER CYCLE

1 2	3 4	5 6 7	8 9	10
trial exams 2 weeks	**10 Focus Study: Mathematics and Resources** **FSRe3** Energy & sustainability 8 lessons MG2H-1, MG2H-2, MG2H-3, MG2H-4, MG2H-5, MG2H-7, MG2H-9, MG2H-10	**11 Algebra and Modelling** **AM5** Modelling non-linear relationships 11 lessons MG2H-3, MG2H-9, MG2H-10	**12 Data and Statistics** **DS5** The normal distribution **DS6** Sampling and populations 8 lessons MG2H-1, MG2H-2, MG2H-7, MG2H-8, MG2H-9, MG2H-10	HSC prep balance

Students in all Mathematics General 2 classes follow this pattern of study.

2018 is the 5th year for the Mathematics General 2 course. The course is very similar to the previous General Mathematics course and students can use previous General exams in their revision.

A significant difference is the introduction of Focus Studies. This inclusion has provided an increase in the relevance of this course.

If you have further questions about this course please phone Mr Murton at school on 4861 2255.

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HSC mathematics

hsc mathematics, scope and sequence

Term 4 – 2016 – 10 weeks – 8 LESSONS PER CYCLE									
1	2	3	4	5	6	7	8	9	10
1 series & applications 5 weeks (7.1 - 7.3, 7.5)					2 geometrical applications of differentiation 5 weeks (10.1 - 10.8)				

Term 1 – 2017 – 10 weeks – 8 LESSONS PER CYCLE									
2	3	4	5	6	7	8	9	10	11
3 integration 16 lessons (11.1 - 11.4)				4 trigonometric functions 16 lessons (13.1 - 13.7)				5 probability 8 lessons (3.1 – 3.3)	

Term 2 – 2017 – 10 weeks – 8 LESSONS PER CYCLE									
1	2	3	4	5	6	7	8	9	10
6 logarithmic and exponential functions 16 lessons (12.1 - 12.5)				7 applications of calculus to the physical world 16 lessons (14.1 - 14.3)				Course review for trial balance	

Term 3 – 2017 – 10 weeks – 8 LESSONS PER CYCLE									
1	2	3	4	5	6	7	8	9	10
Trial exam 2 weeks		8 applications of geometrical properties 12 lessons (2.5)			9 coordinate methods in geom. 8 lessons (6.8)		HSC preparation balance		

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HSC mathematics extension 1

hsc mathematics extension 1, scope and sequence

Term 4 – 2016 – 10 weeks – 4 LESSONS PER CYCLE

1	2	3	4	5	6	7	8	9	10
series & applications (7.1 - 7.6, 7.5) 5 weeks					geometrical applications of differentiation (10.1 - 10.4) 5 weeks				
1 proof by induction 7 lessons (7.4)			**2 polynomials – iterative solutions** 7 lessons (16.4)				**3 harder geometrical app to dy/dx** 6 lessons (10.5E)		

Term 1 – 2017 – 10 weeks – 4 LESSONS PER CYCLE

2	3	4	5	6	7	8	9	10	11
integration (11.1 - 11.4) 16 lessons				trigonometric functions (14.1 - 14.7) 16 lessons				probability (9.1 – 9.3) 8 lessons	
4 binomial theorem 6 lessons (17.1 - 17.3)			**5 methods of integration** 6 lessons (11.5)				**6 harder examples from the mathematics course** 8 lessons		

Term 2 – 2017 – 10 weeks – 4 LESSONS PER CYCLE

1	2	3	4	5	6	7	8	9	10
logarithmic and exponential functions (12.1 - 12.5) 16 lessons					applications of calculus to the physical world (14.1 - 14.3) 16 lessons			Course review for trial balance	
7 further probability 5 lessons (18.2)			**8 extension trigonometry** 8 lessons (13.4E, 13.6E)				**9 extension application of calculus** 7 lessons (14.1E, 14.2E, 14.3E, 14.4)		

Term 3 – 2017 – 10 weeks – 4 LESSONS PER CYCLE

1	2	3	4	5	6	7	8	9	10
Trial exam 2 weeks		applications of geometrical properties (2.5) 12 lessons			coordinate methods in geom. (6.8) 8 lessons		HSC preparation balance		
		10 inverse functions 8 lessons (15.1 – 15.5)					**11 harder examples from the mathematics course & HSC prep** balance		

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HSC mathematics extension 2

hsc mathematics extension 2, scope and sequence

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
term 4	Complex Numbers #2 20 lessons					Graphs #1 16 lessons				Task 1
term 1	Polynomials #7 20 lessons					Harder ext 1 Applications #8 16 lessons				Task 2
term 2	Conics #3 13 lessons			Integration #4 13 lessons				Volumes #5 13 lessons		
term 3	task 3		Mechanics #6 balance							

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HSC mathematics general 1

hsc mathematics general 1, scope and sequence

Term 4 – 2016 – 10 weeks – 8 LESSONS PER CYCLE

1	2	3	4	5	6	7	8	9	10
1 Measurement 4 weeks MM4 Further Applications of Area and Volume			2 Mathematics and Design 6 weeks FSDe1 Scale Drawings and House Plans; FSDe2 Design **TASK 1**						

Term 1 – 2017 – 10 weeks – 5 LESSONS PER CYCLE

2	3	4	5	6	7	8	9	10	11
3 Probability 6 lessons PB2 Applying Probability		4 Financial Mathematics 6 lessons FM4 Credit Cards		5 Data and Statistics 6 lessons DS4 Distributions		6 Mathematics and Household Finance 7 lessons FSHo1 Accommodation costs: buying and renting; FSHo2 Costs of Running a Household, Maintenance and Repairs **TASK 2**			

Term 2 – 2017 – 10 weeks – 5 LESSONS PER CYCLE

1	2	3	4	5	6	7	8	9	10
7 Mathematics and Personal Resource Usage 15 lessons FSPe1 Water Usage and Collection; PSPe2 Electricity; FSPe3 Clean and Green Housing					8 Algebra and Modelling 10 lessons AM3 Further algebraic skills; AM4 Modelling with Functions **TASK 3**				

Term 3 – 2017 – 10 weeks – 5 LESSONS PER CYCLE

1	2	3	4	5	6	7	8	9	10
TRIAL EXAM NO CLASSES		9 Data and Statistics & 10 Mathematics and the Human Body 20 lessons DS5 Interpreting Sets of Data; DS6 Working with Statistics; FSHu1 Blood; FSHu2 Body Measurements; FSHu3 Lung Capacity **TASK 4**							

Students in the Mathematics General 1 class follow this pattern of study.

2018 is only the fourth year for the Mathematics General 1 course.

The course offers those students who have previously struggled to succeed in mathematics a chance to develop their skills without the stress of external exams.

A significant difference in this course is the introduction of Focus Studies. This inclusion has provided an increase in the relevance of this course.

All assessment tasks relate to the Focus Studies and are completed during class time with teacher assistance.

If you have further questions about this course please phone Mr Murton at school on 4861 2255.

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