



AVONSIDE GIRLS' HIGH SCHOOL

MATHEMATICS WITH CALCULUS LEVEL 3, MWC333

COURSE STATEMENT 2009

Aims/General Learning Outcomes

- To apply mathematical skills, concepts and understandings to a range of problems arising in real and simulated situations.
- To select and use appropriate mathematical methods in problem solving.
- To demonstrate the ability to reason logically and systematically.

Equipment

Students are required to have a scientific calculator. It is an advantage to have a graphics calculator.

Course Content

Term 1: Algebra, Trigonometry, Differentiation

Term 2: Complex numbers, Trigonometry

Term 3: Integration, Geometry

Term 4: Differential equations

Achievement Standards for NCEA

This course offers a total of 24 credits at Level 3. The assessment for the **only internally** assessed Achievement Standard, Trigonometry, will take place at the end of Term Two.

Appeals

Any queries about an assessment decision should be made to your class teacher when the assessment is handed back. Any formal appeals should be made **within one school week** of receiving a result. A disputed grade for an assessment will be investigated by Mrs Bull (HOD) or the Principal's Nominee, Ms Lynch (Term 1), Mrs Butler (Term 2, 3 and 4) who will investigate it further.

Work done in pencil or which has 'white-out', (liquid paper) corrections cannot be reconsidered for appeals.

Further assessment opportunities

There will be opportunity for one reassessment for the internal Achievement Standard 90637 which will be available to all eligible students regardless of the level of achievement in the first assessment.

Scholarship Information

There is an opportunity to enter Scholarship in this subject. The scholarship result is determined by a separate three hour examination in late November or early December.

The student will use combinations of techniques and concepts from calculus, algebra, trigonometry, and geometry to solve complex problems in unfamiliar or generalised situations.

Entry for Scholarship

Students wishing to enter scholarship need to discuss this with their teacher. Students who enter will be given the standard for the examination and past examination papers. Some additional tuition will be available in lunch times or at times to be arranged.

MWC333
TEACHING AND ASSESSMENT PROGRAMME 2009
STUDENT TRACKING SHEET

	<i>Achievement Standard details</i>	<i>Achievement standard descriptor</i>	<i>Assessment timing</i>	<i>Grade achieved</i>
Term 1				
Weeks 2 - 4	Basic Skills in Algebra and Trigonometry	Manipulate expressions Understanding trigonometric ratios	Basic skills test Term1 week 4	
Week 5 - 10	Differentiation AS90635 (v2) level 3 External 6 credits	Differentiate functions and use derivatives to solve problems.	Practice Test Term1 week 10	
Term 2				
Week 1 - 5	Complex Numbers AS90638(v2) level3 External 5 credits	Manipulate real and complex numbers, and solve equations.	Practice Test Term 2 week 3	
Weeks 6-10	Trigonometry AS90637(v2) level 3 Internal 4 credits	Solve problems and equations involving trigonometric functions.	Assessment Term 2 week 9 (Reassessment week 10)	
Term 3				
Weeks 1 - 5	Integration AS90636(v2) level 3 Part 1 6 credits External	Integrate functions and use integrals to solve problems.	Practice Test during school exams	
Week 6	School examinations	External practice tasks	90635	
			90636	
			90638	
Week 7 - 10	Conic Sections AS90639(v3) level 3 External 3 credits	Sketch graphs of conic sections and write equations related to conic sections	Practice Test Term3 week 10	
Term 4				
Weeks 1 - 3	Differential Equations AS90636(v2) level 3 Part 2 6 credits External	Integrate functions and use integrals to solve problems		
Weeks 4 – 6	Revision for externals			