

VCE Specialist Mathematics

Specialist Mathematics allows students to develop their knowledge of functions and graphs and algebra (calculus, vectors, probability and statistics). It's an ideal choice for students who have a very strong background in Mathematics. Studying Specialist Mathematics Units 1 and 2 gives students the widest choice and strongest background for Units 3 and 4 Mathematics since they must also be undertaking Mathematical Methods. This allows for coverage of all material to a greater depth, which promotes better understanding.

Unit 1 & 2	Unit 3 & 4
<p>In Unit 1 & 2 you will investigate:</p> <ul style="list-style-type: none"> • Proof and number • Graph theory • Logic and algorithms • Sequences and series • Combinatorics • Matrices • Simulation, sampling and sampling distributions • Trigonometry • Transformations • Vectors • Complex numbers • Functions, relations and graphs • Calculus 	<p>In Unit 3 & 4 you will investigate:</p> <ul style="list-style-type: none"> • Functions, relations and graphs • Differential calculus and integral calculus • Differential equations • Vectors • Complex numbers • Kinematics • Vector calculus • Logic and proof • Data analysis, probability and statistics
Types of assessment	Class Activities
<ul style="list-style-type: none"> • Analysis tasks • Mathematical Investigation • Summary books • Application tasks • Tests • Examinations 	<ul style="list-style-type: none"> • Algebraic manipulation • Statistical analysis of normal distributions • Graphing functions and real-world applications • Applications of geometry, trigonometry and Pythagoras to calculus • Showing working out / method • Analysing concepts and organising information

Careers that may link to this subject area

Actuary

Electrical engineer

Meteorologist

Robotics engineer

Aerospace engineer

Laser and photonics

Mining engineer

Scientist

Chemical engineer

Maths teacher

Nanotechnologist

Civil engineer

Mechanical engineer

Pilot

