What is Specialist Mathematics all about?
Specialist Mathematics allows students to develop their knowledge of functions and graphs, algebra (calculus, vectors, mechanics, probability and statistics). 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.

Who should consider Specialist Mathematics?
Specialist Mathematics is an ideal choice for students who have a very strong background in Mathematics. It is the level of Mathematics that is recommended to be studied by students wishing to undertake tertiary studies in areas such as Science and Engineering. Students enrolled in Units 1 and 2 of this subject are expected to have a sound background in number, algebra, functions and graphing.

Areas of Study:

Unit 1:
- Algebra and Number Systems
- Variation, Sequences and Series
- Geometry and Trigonometry
- Complex Numbers
- Sampling Distributions

Unit 2:
- Number and Proof
- Vectors
- Further Trigonometry
- Kinematics and Statistics
- Further Calculus

Unit 3:
- Circular Functions
- Differential and Rational Functions
- Techniques of Integration
- Applications of Integration
- Differential Equations
- Vectors

Unit 4:
- Complex Numbers
- Kinematics
- Vector Functions
- Dynamics
- Statistics

Type of Assessments in this subject:
- Analysis tasks
- Tests
- Summary books
- Application tasks
- Examinations

Key Skills developed through this area are:
- Apply mathematical processes in routine and non-routine context
- Use of technology

Possible Occupations that could relate to this study include:
- Actuary
- Aerospace Engineer
- Chemical Engineer
- Electrical Engineer
- Pilot
- Laser and Photonics
- Mining engineer
- Maths Teacher
- Scientist
- Mechanical Engineer
- Nanotechnologist
- Robotics Engineer
- Meteorologist

Additional Information:
To enrol in Units 3 and 4 of this subject, students should have previously completed Units 1 and 2 Specialist Mathematics.