

Subject: MATHEMATICS EXTENSION 1

Number of units: 1 unit

NESA Developed: Yes

ATAR: Yes

Major Work: No

What I will learn in this course:

Mathematics Extension 1 is for students who wish to extend their mathematical thinking beyond Mathematics Advanced. The course focuses on mathematical arguments and proofs, the use of mathematical models, and the development of deeper knowledge and understanding in further aspects of mathematics.

IMPORTANT COURSE STRUCTURE: Mathematics Extension 1 is studied concurrently with Mathematics Advanced. It is not a stand-alone course. Students choosing Extension 1 study both Mathematics Advanced and Mathematics Extension 1 in Year 11.

- develop thorough knowledge, understanding and skills in Working mathematically and in communicating concisely and precisely
- develop rigorous mathematical arguments and proofs, and use mathematical models extensively
- explore mathematical problems through observation, reflection and reasoning
- develop an awareness of the interconnected nature of mathematics, its beauty and its functionality
- gain an appropriate mathematical background for future pathways that may involve mathematics and its applications

Areas of study: Mathematics Extension 1 outcomes and content are organised into seven main areas.

- Functions
- Vectors
- Combinatorics
- Statistical analysis
- Proof
- Trigonometric functions
- Calculus

This course may suit students who:

- enjoy mathematics and are confident with algebraic techniques and problem solving
- are prepared to practise regularly outside of class and engage with more challenging abstract ideas
- are considering future study in areas such as mathematics, science, engineering, economics, technology, medicine, business or education

Mathematics Extension 2 in Year 12: Students have the option of studying Mathematics Extension 2 in Year 12. Extension 2 is a Year 12 course studied in addition to Extension 1 and is intended for students with very strong mathematical ability and commitment.