

Course Mathematics Extension 1	NESA Course Code: Preliminary 11250 HSC 15250
1 unit for each of Preliminary and HSC year. Board Developed Course. DOES count in the 6 units of the Board Developed Courses required for the HSC. DOES count towards an ATAR. Corequisite: Mathematics Advanced course Prerequisites: This course assumes that students have achieved all the Core topic outcomes in the Stage 5 Mathematics syllabus and the relevant Advanced and Extension Path topic outcomes. Exclusions: Mathematics Standard	Course costs Nil
Success Criteria (what skills and aptitudes you need to have for success in this subject) • A genuine interest in Mathematics. • Consistent performance at 75% or better in the Core, Advanced and Extension path course. • Thinking and writing skills to explain, analyse and evaluate. • Ability to use deductive reasoning. Course Description Mathematics Extension 1 focuses on the development of students' mathematical arguments and proofs, and use of mathematical models. The course allows students to develop a thorough knowledge and understanding of and competence in further aspects of mathematics as an extension of the Mathematics Advanced 11–12 course. Through the study of Mathematics Extension 1, students: • 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 • develop 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.	
Main Topics Covered	
Preliminary Course Functions Trigonometry Functions Combinatorics	HSC Course Proof Vectors Trigonometric functions Calculus Statistical Analysis
Particular course requirements: Nil	

Assessment for the HSC Course

External Assessment

The examination will consist of a written paper worth 70 marks.

Time allowed: 2 hours plus 10 minutes reading time.

A reference sheet will be provided.

NESA-approved calculators may be used.

The paper will consist of two sections.

Section I (10 marks)

- There will be objective-response questions to the value of 10 marks.

Section II (60 marks)

- Questions may contain parts.

- There will be 23 to 28 items.

- At least one item will be worth 4 or 5 marks.

The examination will be based on the Mathematics Extension 1 Year 12 course and will focus on the Year 12 outcomes.

The Mathematics Advanced course and the Mathematics Extension 1 Year 11 course will be assumed knowledge for this examination.

The Mathematics Extension 1 Year 11 course may be examined.

Students will also be required to complete either the Mathematics Advanced examination paper or the Mathematics Extension 2 examination paper, in addition to the Mathematics Extension 1 paper, based on their course enrolment.

Weighting 100%

Internal Assessment

The objectives of the course are in two components: Knowledge and understanding of course content (50%) and Skills in Working Mathematically (50%).

A number of tasks will be used to determine school-based assessment; any one task may contribute to measuring attainment of both components.

Once the assessment of the HSC course has commenced, formal school-based assessment in this course will focus on the Year 12 outcomes.

The Year 11 course is assumed knowledge and may be assessed.

Weighting 100%