**Course**

# Mathematics Standard

NESA Course Code:
Preliminary M511-1
HSC M5 2-12.5

2 units 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.
Prerequisites: This course assumes that students have achieved all Core topic outcomes in the Stage 5 Mathematics syllabus and the relevant Standard Path topic outcomes.
Can be studied in conjunction with Numeracy CEC.
**Exclusions:** Mathematics Advanced, Extension 1, Extension 2

**Course costs**
Nil

## Success Criteria (what skills and aptitudes you need to have for success in this subject)

- Ability to use mathematics in real life situations.
- Stage 5 grades at bands

## Course Description

Mathematics Standard 11–12 focuses on enabling students to use mathematics to make informed decisions in their daily lives. Students develop understanding and competence through real-world applications of mathematics. Mathematics Standard 1 provides opportunities for students to build confidence and make mathematics meaningful. Students develop their mathematical knowledge and understanding through applying and modelling to prepare for post-school employment or further training.
Mathematics Standard 2 provides a pathway for students to extend their mathematical thinking by examining more complex content, and through applications and modelling.

Through the study of Mathematics Standard 1, students:

- develop their knowledge, understanding and skills in Working mathematically and in communicating concisely and systematically
- consider various applications of mathematics in a broad range of contemporary contexts through mathematical modelling and use these models to solve problems related to their present and future needs
- gain an appropriate mathematical background for post-school employment or further training.

Through the study of Mathematics Standard 2, students:

- develop their knowledge, understanding and skills in Working mathematically and in communicating concisely and systematically
- consider various applications of mathematics in a broad range of contemporary contexts through mathematical modelling and use these models to solve problems related to their present and future needs
- develop an understanding of, and skills in, further aspects of mathematics for concurrent HSC studies
- gain an appropriate mathematical background for a wide range of educational and employment aspirations.

The Year 11 course is undertaken by all students intending to study either the Year 12 Mathematics Standard 1 course or the Year 12 Mathematics Standard 2 course.

## Main Topics Covered

| **Preliminary course** | **HSC course** | |
|---|---|---|
| | **Standard 1** | **Standard 2** |
| Algebra | Algebra | Algebra |
| Financial Mathematics | Financial Mathematics | Financial Mathematics |
| Measurement | Measurement | Measurement |
| Networks | Statistics | Networks |
| Statistics | | Statistics |

**Particular Course Requirements: Nil**

## Assessment for the HSC course

| External Assessment | Weighting | Internal Assessment | Weighting |
|---|---|---|---|
| **Standard 1**<br>The examination will consist of a written paper worth 80 marks.<br><br>Time allowed: 2 hours plus 10 minutes reading time.<br><br>A reference sheet will be provided.<br>NESA-approved calculators may be used.<br>The paper will consist of two sections.<br><br>Section I (15 marks)<br>•There will be objective-response questions to the value of 15 marks.<br><br>Section II (65 marks)<br>•Questions may contain parts.<br>•There will be 25 to 30 items.<br>•At least two items will be worth 4 or 5 marks.<br><br>The HSC external examination in Mathematics Standard 1 is not compulsory. Students may choose to sit for an optional HSC examination.<br><br>The examination will be based on the Mathematics Standard 1 Year 12 course and will focus on the Year 12 outcomes. The Mathematics Standard Year 11 course will be assumed knowledge for this examination and may be examined.<br><br>**Standard 2**<br>The examination will consist of a written paper worth 100 marks.<br>Time allowed: 2 hours and 30 minutes plus 10 minutes reading time.<br>A reference sheet will be provided.<br>NESA-approved calculators may be used.<br><br>The paper will consist of two sections.<br><br>Section I (15 marks)<br>•There will be objective-response questions to the value of 15 marks.<br><br>Section II (85 marks)<br>•Questions may contain parts.<br>•There will be 35 to 40 items.<br>•At least two items will be worth 4 or 5 marks.<br><br>The examination will be based on the Mathematics Standard 2 Year 12 course and will focus on the Year 12 outcomes. The Mathematics Standard Year 11 course will be assumed knowledge for this examination and may be examined. | 100% | The objectives of the course are in two components:<br>Knowledge and understanding of course content (50%) and Skills in Working Mathematically (50%).<br><br>A number of tasks will be used to determine school-based assessment; any one task may contribute to measuring attainment of both components.<br><br>Once the assessment of the HSC course has commenced, formal school-based assessment in this course will focus on the Year 12 outcomes.<br><br>The Year 11 course is assumed knowledge and may be assessed | 100% |