# Mathematics Extension 2 11–12 Syllabus (2024): Stage 6 (Year 12) Australian Curriculum mapping

The Australian Curriculum codes are listed under each syllabus focus area and its associated content groups.

| The nature of proof | Further work with vectors | Introduction to complex numbers | Further integration | Applications of calculus to mechanics |
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| **The language and notation of proof**  ACMSM024  ACMSM026  ACMSM027 | **Vector equations of lines and curves**  ACMSM103  ACMSM104  ACMSM105 | **Arithmetic of complex numbers**  ACMSM067  ACMSM068  ACMSM069  ACMSM070 | **Further integration**  ACMSM047  ACMSM122  ACMSM123 | **Forces and further motion in a straight line**  ACMSM133  ACMSM134  ACMSM135  ACMSM136 |
| **Illustrations of proofs**  ACMSM025  ACMSM028  ACMSM061  ACMSM063 | **Vectors and geometry**  ACMSM039  ACMSM040  ACMSM041  ACMSM102 | **Geometric representation of complex numbers**  ACMSM071 |  | **Simple harmonic motion**  ACMSM136 |
| **Proof of inequalities**  No associated ACARA code |  | **Solving equations with complex numbers**  ACMSM075  ACMSM076  ACMSM090 |  | **Modelling motion without resistance**  ACMSM136 |
| **Further proof by mathematical induction**  No associated ACARA code |  | **Powers and roots of complex numbers**  ACMSM072 |  | **Rectilinear resisted motion**  ACMSM136 |
|  |  | **Describing lines, curves and regions**  No associated ACARA code |  | **Vertical resisted motion**  ACMSM136 |
|  |  |  |  | **Projectiles and resisted motion**  No associated ACARA code |