**STAGE 1 MATHEMATICS**

**PROGRAM 3 OVERVIEW: THREE SEMESTER PRE-MATHEMATICAL METHODS**

This program provides the overview of a three semester course for a cohort of students intending to continue to Mathematical Methods at Stage 2.

**Topics listed in the teaching order outlined in program 3**

**Semester 1**

Topic 1: Functions and Graphs – subtopics 1.1, 1.3 and 1.4

Topic 11: Matrices – subtopic 11.1

*(This topic selected as suitable preparation for those students who may change from pre-Methods to General in Semester 2).*

Topic 2: Polynomials – subtopics 2.1

Topic 3: Trigonometry – subtopics 3.1

Topic 4: Counting and Statistics – subtopics 4.2, 4.3 and 4.4

**Semester 2**

Topic 3: Trigonometry – subtopics 3.2 and 3.3

Topic 4: Counting and Statistics – subtopics 4.1

Topic 12: Real and Complex Numbers – subtopic 12.3

Topic 2: Polynomials – subtopics 2.2

Topic 1: Functions and Graphs – subtopics 1.2

Topic 5: Growth and Decay – subtopics 5.1, 5.2, and 5.3

**Semester 3**

Topic 9: Vectors in the Plane – subtopics 9.1, 9.2 and 9.3

Topic 6: Introductory Calculus – subtopics 6.1, 6.2, 6.3, 6.4 and 6.5

Topic 10: Further Trigonometry – subtopics 10.1 and 10.2

**Pre-approved learning and assessment plans**

See Learning and Assessment Plans > Pre-approved LAPs

LAP 5

LAP 6

LAP 7

**Mathematical investigations**

Packaging – Christmas balls

Polynomials turning points and points of inflection

Calculus cake tin – optimisation