TELOPEA PARK SCHOOL
LYCÉE FRANCO-AUSTRALIEN

ACT Government Education

Course Outline Year 10 Semester 2 2026

Mathematics

Course Description and Aims

The framework for MYP mathematics outlines four branches of mathematical study.

1. Numerical and abstract reasoning
2. Thinking with models
3. Spatial reasoning
4. Reasoning with data

The study of mathematics is a fundamental part of a balanced education. It promotes a powerful universal language, analytical reasoning and problem-solving skills that contribute to the development of logical, abstract and critical thinking. The MYP mathematics and challenge mathematics courses promote both inquiry and application, helping students to develop problem-solving techniques that transcend the discipline and are useful in the world outside school.

Mathematics in the MYP is tailored to the needs of students, seeking to intrigue and motivate them to want to learn its principles. Students should see authentic examples of how mathematics is useful and relevant to their lives and be encouraged to apply it to new situations.

MYP Assessment Criteria

Criterion A: Knowing and understanding

Students select and apply mathematics to solve problems in both familiar and unfamiliar situations in a variety of contexts, demonstrating knowledge and understanding of the framework's branches (number, algebra, geometry and trigonometry, statistics and probability).

Criterion B: Investigating patterns

Students work through investigations to become risk-takers, inquirers and critical thinkers.

Criterion C: Communicating

Students use appropriate mathematical language and different forms of representation when communicating mathematical ideas, reasoning and findings, both orally and in writing.

Criterion D: Applying mathematics in real-life contexts

Students transfer theoretical mathematical knowledge into real-world situations and apply appropriate problem-solving strategies, draw valid conclusions and reflect upon their results.

Course Outline

This semester, you will deepen your algebraic reasoning and problem-solving skills through probability, geometry, measurement and trigonometry while applying mathematics to practical and real-world contexts. In Term 3, you will expand, simplify and factorise algebraic expressions, solve equations algebraically, and explore quadratic expressions including completing the square. You will investigate probability through multi-step chance experiments, conditional probability, simulations and diagram representations such as tree diagrams and Venn diagrams. You will also explore networks, algorithms and geometric reasoning, including congruent proofs and connectedness in practical situations. In Term 4, you will solve problems involving the surface area and volume of composite objects, investigate the effect of approximations in calculations, and apply scale drawings to real-world contexts. You will also strengthen your trigonometry skills by applying Pythagoras' theorem and trigonometric ratios in two- and three-dimensional problems, before extending your understanding to the sine and cosine rules, the unit circle and circular functions.

Assessment Tasks

Assessment Task	**Due***
Test- Criterion D	Week 5
Test- Criteria A & C	Week 8
Test- Criterion B	Week 14
Test- Criteria A & C	Week 17

**Due date subject to change at classroom teacher discretion.*

Approaches to Learning

Communication skills and Thinking skills.

Australian Curriculum Achievement Standard

The Achievement Standard for Year 10 Mathematics is based on the Australian Curriculum v9 Mathematics https://www.australiancurriculum.edu.au/.