Name of Subject: Mathematical Applications

Stage: 1 (Year 11)

General information: In the study of Mathematics students participate in a wide variety of problem-solving activities. The subject gives students the abilities and skills required in the workplace and in everyday life. They learn how to approach new challenges by investigating, modelling, reasoning, visualising, and problem-solving with the goal of communicating to others the relationships observed and the problems solved. Stage 1 Mathematical Applications can be studied as a 10-credit subject or a 20-credit subject, however, if students plan to pursue Mathematical Applications at Stage 2, then they must complete a full year of Mathematics at Stage One. Stage One Mathematical Applications allows students to achieve the numeracy requirement of the SACE. Students who achieve a C grade or better in this subject meet the compulsory 10-credit numeracy requirement. The focus capabilities for this subject are communication, citizenship, personal development, work, and learning.

Content: At Samaritan College, the chosen topics articulate with the topics covered in Stage 2 Mathematical Applications namely Applied Geometry, Optimisation, Matrices and Statistics and are as follows:

- Topic 1: Earning and Spending
- Topic 2: Measurement
- Topic 3: Data in Context
- Topic 4: Networks and Matrices
- Topic 5: Saving and Borrowing
- Topic 6: Simulating Random Processes
- Topic 7: Statistics
- Topic 8: Trigonometry
- Topic 12: Functions and Graphs

Assessments: The following assessment types enable students to demonstrate their learning in Stage 1 Mathematics:

- Assessment Type 1: Skills and Applications Tasks (Tests)
- Assessment Type 2: Folio (Investigations)

Students should provide evidence of their learning through four or five assessments each semester. Each assessment type should have a weighting of at least 20%. Students undertake:

- at least two skills and applications tasks
- at least two investigations for the folio per semester

All assessments are school based and subject to moderation.

Special Information: Students will need to use electronic technology in this course. Graphics calculators (Texas Instruments) are available for purchase through the College at the end of the academic year.

Preferred prerequisites: A minimum C grade for Year 10 Mathematics or a minimum A grade for Year 10 Mathematics Pathways. Whilst investigations make up part of the assessment for this course, the
major focus is on test and exam performance and therefore students must have an effective study program and an industrious work ethic to cope with the demands of skills and applications tasks.