Honours Precalculus

Knowledge Content

Students who take this course will study the following topics:

- Functions
- Transformations
- Triangle trigonometry
- Circular trigonometry
- Vectors
- Logarithmic and exponential functions
- Matrices
- Statistics (regression analysis)
- Probability
- Conic sections
- Sequences and series
- Introduction to calculus.

Skills Content

Upon completion of this course, students will be able to:

- Graph functions
- Recognise transformations
- Find sides and angles of triangles using trigonometry
- Find sine, cosine and tangent of angles of revolution
- Solve trigonometric equations
- Apply vector properties
- Graph and analyse exponential and logarithmic functions
- Perform operations on matrices
- Find matrices that generate transformations
- Perform regression analysis on sets of data
- Find the probability of simple and compound events
- Identify the properties of circles, ellipses and hyperbolas
- Find the terms in arithmetic and geometric sequences
- Find the sum of arithmetic and geometric series
- Find the derivates of polynomials.

Assessment

- Tests
- Quizzes
- Homework
- Classwork.

Examinations

Internal end of semester exams.

Resources

– Brown, Roger G., *Advanced Mathematics*. McDougal Little/Houghton Mifflin, 2003
– A graphic display calculator, such as the TI-84, is needed.

Prerequisites

Integrated Math 2 – Grade of 4 or better and/or teacher recommendation.

Credits

One Credit.