

Henry Street High School

MHF 4U1

Advanced Functions, Grade 12, University Preparation

COURSE OUTLINE

COURSE DESCRIPTION

This course extends students' experience with functions. Students will investigate the properties of polynomial, rational, logarithmic, and trigonometric functions; develop techniques for combining functions; broaden their understanding of rates of change; and develop facility in applying these concepts and skills. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. This course is intended both for students taking the Calculus and Vectors course as a prerequisite for a university program and for those wishing to consolidate their understanding of mathematics before proceeding to any one of a variety of university programs.

UNITS OF STUDY

UNIT 1 – Functions

UNIT 2 – Rates of Change

UNIT 3 – Polynomial Functions

UNIT 4 – Polynomial Equations and Inequalities

UNIT 5 – Rational Functions

UNIT 6 – Trigonometric Functions

UNIT 7 – Trigonometric Identities and Equations

UNIT 8 – Exponential and Logarithmic Functions

UNIT 9 – Combinations of Functions

ASSESSMENT AND EVALUATION

ASSESSMENT STRATEGIES

- ❖ Unit Tests
- ❖ Quizzes
- ❖ Journals
- ❖ Investigations
- ❖ Inquiries
- ❖ Projects
- ❖ Assignments
- ❖ Final Summary Booklet
- ❖ Final Examination

EVALUATION

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| ❖ Termwork | 70% |
| ❖ Final Summative Evaluation | 30% |

OTHER INFORMATION

CLASS REQUIREMENTS

- ❖ Textbook: Advanced Functions, Nelson
- Equipment: Scientific calculator, 3-ring binder, lined paper, graph paper, pencil, coloured pens or pencils, eraser, ruler, geometry set