Course Name:    **Blended Pre-Calculus 30S**

Course Summary and Expectations:

Grade 11 Pre-Calculus Mathematics (30S) is designed for students who intend to study calculus and related mathematics as part of post-secondary education. Some examples of this include Engineering, many Science degrees, and most recently Asper School of Business now requires Pre-Calculus. It builds on the topics studied in Grade 10 Introduction to Applied and Pre-Calculus Mathematics (like Domain and Range, Graphing Skills, Algebra Skills, etc) and provides background knowledge and skills for Grade 12 Pre-Calculus course.

Due dates for the entire semester are pre-scheduled, to help students stay on track with timing and the material of the course. Students are expected to work through the Content material on their own time (roughly one hour per school day on average), and to email their teacher if they are feeling stuck or have questions. Roughly, each Module is scheduled to take two weeks to complete.

In this course, there are 8 Modules, listed below. Each Module contains definitions, example problems, practice questions, and more to help the students learn the material and prepare for graded work.

* Sequences and Series: Arithmetic and Geometric Sequences, Arithmetic and Geometric Series, Infinite Geometric Series
* Quadratic Functions: Factoring and Factored Form, Vertex Form, Completing the Square, intercepts
* Quadratic Equations: All concepts from “Quadratic Functions”, as well as determining solutions in using many different methods
* Trigonometry: Sine Law and Cosine Law, Angles in Standard Position, Special Triangle Relationships
* Absolute Values and Radical Equations: Solving and Graphing Absolute Value functions, Solving and Graphing Radial (root) functions, Simplifying radial expressions
* Rational Equations and Reciprocal Functions: Solving and Graphing Rational Equations, Solving and Graphing Reciprocal functions, Invariant points
* Systems of Equations: Graphing and Solving Systems, Substitution and Elimination methods
* Linear and Quadratic Inequalities: Graphing and Solving Systems, Test points

Evaluation/Grading Summary: For this course, the Assignments are worth 40% of the total grade, and the Tests are worth 60% of the total grade (with the End of Semester Assessment being included in the test grade). In this course, there is one Test per Module, and each Module has anywhere from 2-4 Assignments for students to show their learning.