# **Pre-Calculus 30SP**

**Course Outline** 

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### **Course Description:**

Grade 11 Pre-Calculus Mathematics is designed for students who intend to study calculus and related mathematics as part of post-secondary education. The course comprises a high-level study of theoretical mathematics with an emphasis on problem solving and mental mathematics.

# **Topics:**

Systems of Equations - solve and graph linear-quadratic and quadratic-quadratic systems of equations

Linear and Quadratic Inequalities - solve linear and quadratic inequalities

Quadratic Functions and Quadratic Equations - solve problems involving quadratic functions and equations, including vocabulary and graphing

Trigonometry - solve problems involving sine law, cosine law, and trigonometric ratios for triangles in all 4 quadrants

Sequences & Series - solve problems involving arithmetic and geometric sequences

Rational Expressions and Equations - perform operations on rational expressions

Absolute Value and Reciprocal Functions - graph and solve problems involving rational equations, including reciprocal functions; solve and graph problems which involving absolute value

Radical Expressions and Equations - solve problems involving operations on radicals and radical equations

#### Assessment:

Summative Assessment: 10% Rich Performance Tasks (assignments, quizzes, etc.) 65% Tests 25% Exam

\*\*Students will be given the opportunity to re-do one (1) summative assessment over the course of the semester. Additional re-do opportunities only exist at the discretion of the instructor.

A comprehensive common exam based on the essential outcomes will be used at the end of the course.

# **Missing Tests:**

Any student missing an important summative assessment like a test may be required to be assessed with an alternate and possibly more challenging assessment (Rationale: student has created an advantage by having more time to prepare and/or discuss assessment items). Missing an assessment with parental permission, illness, field trip, court appearance, etc. may still warrant an alternate assessment as per the instructor.

### **Final Examination:**

If a student's final exam mark is higher than their term mark, the final exam weighting will be considered at 100%. That is, if a student scores higher on the final exam than their term mark, the final exam score becomes their final course grade. This will NOT be considered in reverse (i.e. the final exam will hold a minimum respective weight as per the course outline).

# Learning Behaviours:

Personal Management Skills, Active Participation in Learning and Social Responsibility are assessed during formal reporting times and are recorded on the report card.

# Interventions:

Focus must be on academic success in this course. Should there be a concern about a lack of learning:

-participation in extra-curricular activities will be suspended immediately -parents will be contacted to discuss options -use noon hour tutoring and/or after school tutoring on Wednesdays

# **Digital Citizenship:**

Technology (iPads, graphing calculators, etc.) will be used in the classroom to enhance learning. Personal devices will be stored during class time. Free apps such as Desmos are encouraged, however, these devices are not allowed on tests or exams; only basic scientific calculators are acceptable. Personal devices are to be used solely for positive educational purposes, otherwise, they should be stored where you will not be interrupted by its vibrating and on silent during class instructional time. While taking tests, please put your phone in the basket at the front of the room. If you are on your phone during instructional time, you may be asked to put your phone in the basket daily so that you can concentrate on the lesson.

# **Class Expectations/Beliefs:**

It is expected that all members of the school community will uphold the underlying beliefs of the school code which include the following: Learning, Respect, Responsibility and Safety. Everything we do focuses on providing learning opportunities for all members of our school community. Be respectful of each other, the classroom, and our school environment. Come ready to learn! Make wise choices! And keep everyone safe physically and emotionally!