



Pre-Calculus 11 Course Outline (Semester System)

Teacher: Mr. F. Villanueva

Room: 204

Email: fvillanueva@sd44.ca

Flex Time: Mon – Fri: 8:30 – 9:05 (Room 204)

Mathematics 11 (<https://curriculum.gov.bc.ca/curriculum/mathematics/11/pre-calculus>)

Big Ideas

Algebra allows us to <u>generalize</u> relationships through abstract thinking.	The meanings of, and <u>connections</u> between, operations extend to powers, radicals, and polynomials.	Quadratic <u>relationships</u> are prevalent in the world around us.	Trigonometry involves using <u>proportional reasoning</u> to solve <u>indirect measurement</u> problems.
---	--	--	--

Curricular Competencies

Students are expected to be able to do the following:

Reasoning and Modelling

- Develop thinking strategies to solve puzzles and play games
- Explore, analyze, and apply mathematical ideas using reason, technology, and other tools
- Estimate reasonably and demonstrate fluent, flexible, and strategic thinking about number
- Model with mathematics in situational contexts
- Think creatively and with curiosity and wonder when exploring problems

Understanding and Solving

- Develop, demonstrate, and apply conceptual understanding of mathematical ideas through play, story, inquiry, and problem solving
- Visualize to explore and illustrate mathematical concepts and relationships
- Apply flexible and strategic approaches to solve problems
- Solve problems with persistence and a positive disposition
- Engage in problem-solving experiences connected with place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures

Communicating and Representing

- Explain and justify mathematical ideas and decisions in many ways
- Represent mathematical ideas in concrete, pictorial, and symbolic forms
- Use mathematical vocabulary and language to contribute to discussions in the classroom
- Take risks when offering ideas in classroom discourse

Connecting and Reflecting

- Reflect on mathematical thinking
- Connect mathematical concepts with each other, with other areas, and with personal interests

- Use mistakes as opportunities to advance learning
- Incorporate First Peoples worldviews, perspectives, knowledge, and practices to make connections with mathematical concepts

Content

Students are expected to know the following:

- Real number system
- Powers with rational exponents
- Radical operations and equations
- Polynomial factoring
- Rational expressions and equations
- Quadratic functions and equations
- Linear and quadratic inequalities
- Trigonometry: non-right triangles and angles in standard position
- Financial literacy: compound interest, investments, loans

Course Materials

Students are expected to bring the assigned textbook, 3-ring-binder, line and/or graph papers, pencils, pen, erasers, ruler, scientific/graphing calculator, and electronic device to access to Microsoft Teams and other approved educational apps. Students may not bring electronic devices on tests.

On-Going Assessment

Class assessments include group activities, homework, quizzes, projects, journal, practice tests, unit tests, and a final exam. Students will receive a percentage and letter grade in line with the prescribed provincial grading system.

Policies and Procedures

Students are expected to attend class regularly and on time with the required resource materials, as well as to participate in class activities, complete assigned work, and comply by the rules and routine of the class.

Excused Absence(s)

Absenteeism often impedes student success. Parents/legal guardians are requested to communicate absence(s) to the office. Students are then responsible get caught up with missing work either by making an appointment with the teacher during Flex time, lunch or after school.

(Student signature)

(Parent / Guardian signature)