

Pre-Calculus 40

Mathematics

2010-2011

Teacher: Mr. Scott Wiebe

Rationale:

In order to meet the challenges of society, high school graduates must be mathematically literate. They must understand how mathematical concepts permeate daily life, business, industry, the environment, and technology. They must appreciate the usefulness and diversity of mathematics. To this end senior students must continue to be **creative thinkers, problem solvers, and data managers.**

Goals:

Our goal is that you will:

- exhibit a positive attitude toward mathematics
- engage and persevere in mathematic tasks and projects
- contribute to mathematical discussions
- take risks in performing mathematical tasks
- exhibit curiosity
- Become mathematically mature
 - demonstrates understanding of important concepts from multiple perspectives. (graphically, numerically, analytically)
 - have a strong understanding of prerequisite algebra concepts that connect with this course and beyond. Algebraic definitions, techniques, and pre-calculus results (concept of function, simplifying rational expressions and trig. identities) are useful tools for the student, not stumbling blocks.
 - able to use technology (calculators, spreadsheets, etc) as a means of working with data and graphs to enhance understanding, not as a crutch to avoid computation that he or she does not understand.
 - Comfortable doing independent research – finding and using mathematical information that is not directly available in the course textbook or class lectures.
- enjoy their mathematical experiences

Course Outline:

Unit A:	Circular Functions	23 Hrs.
Unit B:	Transformations	15 Hrs.
Unit C:	Trigonometric Identities	10 Hrs.
Unit D:	Exponents and Logarithms	15 hrs.
Unit E:	Permutations, Combinations, Binomial Theorem	15 Hrs.
Unit F:	Conics	8 Hrs. *independent study
Unit G:	Probability	15 Hrs.
Unit H:	Geometric Sequences	5 Hrs.
Unit I:	Statistics	12 Hrs. *optional – time permitting

Grading and Reporting:

Grades will be calculated as follows:

10%	Mental Math
20%	Homework, Projects, Quizzes.
30%	Tests – every second Friday.
10%	Midterm Test – in class over 2 days (Nov. 4 – 5)
30%	Final Examination (Provincial Standards Test – No exemptions ☺) Monday Jan 24, 2011