

Advanced Mathematics 45S

Course Outline

Instructor: Mrs. Carol Larson
Phone: 204-734-4511 Ext. 2207
Email: clarson@svsd.ca

Course Description:

This course introduces topics which will appear in a wide range of mathematical fields. Suggested topics include Matrices, Conics, 3-D Geometry, Statistics, Vectors, Complex Numbers and Polar Coordinates, and Number Theory. Four of these topics are to be completed for the half credit course. If you want a full credit, then eight topics, including all seven core topics above are to be covered. The purpose of this course is to review various math topics in preparation for courses at the university level. I have chosen to emphasize the following topics:

Topics:

Conics – Conic sections include circles, ellipses, parabolas and hyperbolas --- deriving the equations and graphing each

Matrices – what is a matrix, performing operations on matrices, and solving systems of Equations using matrices

Statistics – standard deviation, percentile rank, mean, median, mode, weighted mean, and probability topics including permutations, combinations, addition law, complement of an event, and conditional probabilities

Vectors – basic vector operations, using the dot product and cross product of vectors to solve problems

Assessment:

Summative Assessment:	Assignments/ tests/ quizzes	80%
	Exam	20%

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.

Digital Citizenship:

Use of personal devices is **not allowed during class time**. As mandated by the province, **Grade 9 to 12 students: banned from cell phone use during class time on campus and off campus but are permitted to responsible use of cell phones during break times and lunch.** I have provided

you with a safe place for your device at the front of the room. There are also locations available to charge devices during class time.

*"All members of the Swan Valley School Division community are expected to use digital technology in a safe, respectful, responsible, and ethical manner. SVSD devices are to be used in the classroom for learning. Students are encouraged to use these devices **as supported by the classroom teacher for positive educational benefits** and guided classroom instruction.*

*****Absolutely no electronic devices are permitted during quizzes, tests, or exams. Students who are caught with electronic devices will receive an automatic zero without debate*****

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!