CENTENNIAL REGIONAL HIGH SCHOOL

COURSE OUTLINE

<u>Subject</u>:Mathematics; Science Option   <u>Level</u>:   Secondary 5

<u>Course Content</u>:

- **Arithmetic and Algebra**
    - Arithmetic and algebraic expressions
    - Relations, functions, and inverses
    - Systems
    - Manipulating arithmetic and algebraic expressions, using the properties of radicals, exponents, logarithms, and absolute values
    - Analyzing situations
    - Optimizing a situation, considering different constraints

- **Geometry and Graphs**
    - Analytic geometry
    - Manipulating trigonometric expressions
    - Analyzing situations involving the concepts of congruence, similarity, geometric transformation, conic and vector

<u>Evaluation Methods</u>

Under the Quebec Education Program (QEP), students will be evaluated according to two Mathematical competencies. *(see chart)*

EVALUATING WITH COMPETENCIES

C1: Solves a Situational Problem 30%	C2: Uses Mathematical Reasoning 70%

A situational problem . . .
· Has not previously been presented in the learning process
· Involves using a new combination of rules or principles, that the student may or may not have previously learned, to create a solution
· Has a solution that has not been encountered before
 	
The student will . . .
· Decode the elements of the problem that can be processed mathematically
· Represent the problem by using a mathematical model
· Work out a mathematical solution
· Validate the solution
· Share information related to the solution
 	
Evaluation Criteria
CR1 Oral or written indication that the student has an appropriate understanding of the situational problem
CR2 Mobilization of mathematical knowledge appropriate to the situational problem
CR3 Development of a solution appropriate to the situational problem
CR4 Appropriate validation of the steps in the solution
	A reasoning problem . . .
	· Requires organization & application of mathematical concepts & processes in a clearly defined context
	· Could be one of three different subtypes:
	  - *Application*: Choose & apply the appropriate mathematical concepts
	  - *Validation*: Justify a statement, check a result/procedure, take a position, provide a critical assessment, or convince using mathematical arguments
	  - *Conjecture*: Uses inductive, analogical, and deductive reasoning to make a proposition or a conjecture
	
	The student will . . .
	· Make conjectures
	· Construct & use networks of mathematical concepts & processes
	· Construct proofs
	
	Evaluation Criteria
	CR3 Proper implementation of mathematical reasoning suited to the situation
	CR2 Correct application of concepts and processes suited to the situation
	CR4 Proper organization of the steps in a proof suited to the situation
	CR5 Correct justification of the steps in a proof suite to the situation
	CR1 Formulation of a conjecture appropriate to the situation

*Please note that every student is responsible for ALL classes missed and is required to communicate with their teacher ASAP for any work, information, and notes.

**Please refer to the Faculty & Staff Directory at http://www.crhs.rsb.qc.ca/ for your teacher's email/website address