CENTENNIAL REGIONAL HIGH SCHOOL

COURSE OUTLINE

Subject:Mathematics; Cultural, Social and Technical Option   **Level:** Secondary 5

Course Content:

- **Arithmetic and Algebra**
  – Systems of first-degree inequalities in two variables
  – Analyzing and optimizing a situation and making decisions, using linear programming
  – Concepts and processes linked to the manipulation of exponential and logarithmic functions. The study of one being the universe of the other but especially in a financial context.

- **Statistics and Probability**
  – Conditional probability
  – Analyzing probability data and making decisions related to the data
  – Making decisions concerning social choices

- **Geometry and Graphs**
  – Equivalent figures
  – Cosine Law
  – Graphing
  – Analyzing and optimizing situations involving the concept of a graph and making decisions related to these situations.

Evaluation Methods

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

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

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