CENTENNIAL REGIONAL HIGH SCHOOL

COURSE OUTLINE
2021-2022

Subject: Mathematics; Cultural, Social and Technical Option **Level:** Secondary 4

Course Content:

- Arithmetic and Algebra
  - Algebraic expressions
  - Relations, functions, and inverse
  - Systems
  - Analyzing data from situations related to economics, social issues, technical or scientific contexts, or everyday life

- Statistics
  - One-variable distribution
  - Two-variable distribution
  - Analyzing probability data and making decision related to the data
  - Analyzing situations involving a one- or two-variable distribution, using appropriate tools, and making decisions related to these situations

- Geometry and Graphs
  - Analytical geometry
  - Measurement (metric relations and triangles)
  - Analyzing situations involving geometric and graphical models
  - Trigonometry

Evaluation Methods

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

Term Weighting:

Each term will be weighted.

TERM 1: 40% TERM 2: 60%

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 any and 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

Revised: August 2021