



# CENTENNIAL REGIONAL HIGH SCHOOL

## COURSE OUTLINE 2023-2024

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**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*)

## EVALUATING WITH COMPETENCIES

C1: Solves a Situational Problem 30%	C2: Uses Mathematical Reasoning 70%
<p><i>A situational problem . . .</i></p> <ul style="list-style-type: none"> <li>▪ Has not previously been presented in the learning process</li> <li>▪ Involves using a new combination of rules or principles, that the student may or may not have previously learned, to create a solution</li> <li>▪ Has a solution that has not been encountered before</li> </ul> <p><i>The student will . . .</i></p> <ul style="list-style-type: none"> <li>▪ Decode the elements of the problem that can be processed mathematically</li> <li>▪ Represent the problem by using a mathematical model</li> <li>▪ Work out a mathematical solution</li> <li>▪ Validate the solution</li> <li>▪ Share information related to the solution</li> </ul> <p><i>Evaluation Criteria</i></p> <p>CR1 Oral or written indication that the student has an appropriate understanding of the situational problem</p> <p>CR2 Mobilization of mathematical knowledge appropriate to the situational problem</p> <p>CR3 Development of a solution appropriate to the situational problem</p> <p>CR4 Appropriate validation of the steps in the solution</p>	<p><i>A reasoning problem . . .</i></p> <ul style="list-style-type: none"> <li>▪ Requires organization &amp; application of mathematical concepts &amp; processes in a clearly defined context</li> <li>▪ Could be one of three different subtypes:               <ul style="list-style-type: none"> <li>- <i>Application</i>: Choose &amp; apply the appropriate mathematical concepts</li> <li>- <i>Validation</i>: Justify a statement, check a result/procedure, take a position, provide a critical assessment, or convince using mathematical arguments</li> <li>- <i>Conjecture</i>: Uses inductive, analogical, and deductive reasoning to make a proposition or a conjecture</li> </ul> </li> </ul> <p><i>The student will . . .</i></p> <ul style="list-style-type: none"> <li>▪ Make conjectures</li> <li>▪ Construct &amp; use networks of mathematical concepts &amp; processes</li> <li>▪ Construct proofs</li> </ul> <p><i>Evaluation Criteria</i></p> <p>CR3 Proper implementation of mathematical reasoning suited to the situation</p> <p>CR2 Correct application of concepts and processes suited to the situation</p> <p>CR4 Proper organization of the steps in a proof suited to the situation</p> <p>CR5 Correct justification of the steps in a proof suite to the situation</p> <p>CR1 Formulation of a conjecture appropriate to the situation</p>

*\*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*