



A transition
propelled by
our resources

November 21 to 24, 2022

DÉFI MINIER

Québec City Convention Center

2022

Participants are committed to reading the Défi minier Participant Guide and following all instructions contained therein. Some elements of this guide may be revised or modified at any time (the date at the bottom of this page is proof of the latest version).

DÉFI MINIER QUÉBEC MINES

Competitions encourage participation and also help to discover talent and improve the visibility of a line of business. The mining sector requires people who are passionate about discovering new resources, developing their ideas, and developing their businesses. With this in mind, the **Défi MINIER Québec Mines** contest is open to CÉGEP students.

The prize to be won is a **\$3000** scholarship to be awarded to the winning team.

CONTEST RULES

PARTICIPANTS

The Défi MINIER Québec Mines is open to second- and third-year students enrolled in the Mineral Technology Studies Program at the Cégep de l'Abitibi-Témiscamingue, the Cégep de Sept-Îles or the Cégep de Thetford. The teams will consist of three students. Participants must have the necessary skills to develop a mining strategy.

GOAL AND PROCESS

The objective of the Défi MINIER Québec Mines is to develop a mineralized zone of Québec that may have economic potential, by carrying out the following three steps:

- **Part 1:** Target a mineralized zone or area prospective to mining, based on a geological map predetermined by the Ministère, at scale 1:50,000. Identify and define the geographic and geological area, prospective lithological units, metallotectes and mineral potential using the **Système d'information géominière du Québec (SIGÉOM - Geomining Information System)** to support the choice of the zone.
- **Part 2:** Perform calculations related to the study of a predefined mineralized zone, i.e. assessing the impact of dilution or loss of ore for an underground mine, as well as calculations of density, wall angle, medium grade, quantity of metal and cutoff grade.
- **Part 3:** Propose an approach for processing ore from this mineralized zone. Define flow patterns, material balances and metallurgical balances. Select the main equipment necessary for processing.

Teams will be required to produce and submit a report of up to five pages at the end of each of Parts 1 to 3. Participating teams will have a period of **3 hours** per part, for a total of **9 hours** to complete the entire challenge. The three parts of the challenge may be completed at three different times to take into account the availability of registered teams. Teams from the same CÉGEP will be required to complete each part of the challenge at the same time.

Each CÉGEP will have to provide each team with at least two computer workstations containing the software needed to carry out the Défi MINIER:

Workstation 1

- Microsoft Office suite (XP)
- Adobe Illustrator 6

Workstation 2

- Microsoft Office suite (XP)
- Adobe Illustrator 6
- Promine and/or Surpac and/or AutoCAD and/or ArcGIS and/or MapInfo

Participants will be able to receive help from advisors (see Technical Support).

Participants will be able to bring and refer to their course notes.

Exchanges with other students in the department or professors will be restricted by a controller.

At the end of each part, a report must be submitted.

At the end of the contest, each team must have submitted all parts of their project. They will present the strategies used and the results of their work.

The evaluation will be based solely on the content of the reports.

TECHNICAL SUPPORT

During the challenge, teams will have 20 minutes during each part to consult with a teacher of their choice.

REPORT

Participants will be required to submit their reports, up to a maximum of five pages per part, in Word format, via WeTransfer or any other transfer platform. Each report may be illustrated with maps as required. The document should include clear and specific information as no oral presentations will be made to the jury.

Teams are responsible for keeping backup copies of their work.

SUBMISSION AND CORRECTION

- Teams will have until **October 28** to submit their work to the person in charge at their CÉGEP.
- An initial judgment will be made by CÉGEP representatives. Only the work of the two best CÉGEP teams will be submitted to the Québec Mines + Énergie jury.
- The work must be submitted via WeTransfer (<https://wetransfer.com/>) by **November 4, 2022**.
- The jury will consist of four members, representing the Ministère de l'Énergie et des Ressources naturelles (MERN) and COREM.

WINNING TEAM ANNOUNCEMENT

The announcement and award ceremony for all the contests of Québec Mines + Énergie will take place on the stage of **Room 400** of the Centre des congrès de Québec, on **Wednesday, November 23**.

REPORT EVALUATION GRID

Part 1: Target a mineralized zone prospective to mining from a geological map and using the Système d'information géominère du Québec (SIGÉOM - Geomining Information System)

<u>Evaluation criteria</u>	<u>Weighting</u>
■ Clarity of information and overall quality of presentation. Is the report easy to understand and well-illustrated?	10%
■ Quality of French (spelling, grammar and syntax).	10%
■ Use of available data. Was the data used in a correct and relevant manner?	25%
■ Relevance for the location of the mineralized zone and explanations.	40%
■ Sustainable development perspective.	10%
■ Project originality.	5%

Part 2: Perform calculations related to the study of the mineralized zone

<u>Evaluation criteria</u>	<u>Weighting</u>
■ Clarity of information and overall quality of presentation. Is the report easy to understand and well-illustrated?	10%
■ Quality of French (spelling, grammar and syntax).	10%
■ Use of available data. Was the data used in a correct and relevant manner?	25%
■ Relevance for the location of the mineralized zone and explanations.	40%
■ Sustainable development perspective.	10%
■ Project originality.	5%

Part 3: Propose an approach to ore processing for the mineralized zone

<u>Evaluation criteria</u>	<u>Weighting</u>
■ Clarity of information and overall quality of presentation. Is the report easy to understand and well-illustrated?	10%
■ Quality of French (spelling, grammar and syntax).	10%
■ Use of available data. Was the data used in a correct and relevant manner?	25%
■ Relevance of approaches and calculation methods	40%
■ Sustainable development perspective.	10%
■ Project originality.	5%