cGEM 2026: Introductory Team Packet

The Canadian Genetically Engineered Machine Competition

Official Rules & Competition Structure

2026 Inaugural Season



Organized by **iGEM Ontario HS** in partnership with **iGEM University of Toronto**.

Last updated **July 12th, 2026**.

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1. OVERVIEW

cGEM (Canadian Genetically Engineered Machine) is a national, multi-round biotech case competition for Canadian high school students. As a group of 3-4 students, you must select a real-world problem and propose a synthetic biology, biotechnology, or computational biology solution.

> *cGEM's Inspiration:*
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> *"This competition is modelled after established university case competitions like Rotman Commerce's **The Boardroom**, adapted for the life sciences. cGEM is designed to give high school students a taste of university-level research thinking, scientific communication, and interdisciplinary problem-solving." – iGEM Toronto HS Executive Team*

This competition has **two** rounds that all participants should be aware of. Please find more information in **Section 4: Competition Structure**.

1) **Preliminaries | Mid-August**: This is an online **written** submission that all teams must complete.
2) **Finals | 2-3 weeks after prelims**: Finals will be held **in-person** (or virtual option available for those who cannot make it) at the University of Toronto, where the top 10 teams will be judged by a panel of university researchers, graduate students, and industry professionals. From there, a last round determining the **top 3 teams** will occur.

2. Eligibility

2.1 Who Can Compete

- Open to all current high school students (Grades 9–12) in Canada
- Teams of 3–4 members
- Team members may be from different schools
- Students may only be on **one** team
- No prior research or lab experience required

cGEM strives to be inclusive of all students. If you have any questions regarding eligibility or require any accommodations, please email us at igemontariohs@gmail.com.

2.2 Free Agents

Students who do not have a full team may register as a **Free Agent**. Free Agents will be matched with other Free Agents in their region to form a team of 3–4. Free Agent registration closes ***one week before*** the standard registration deadline.

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3. Registration & Fees

Item	Details
Registration Fee	N/A for cGEM 2026
Registration Opens	July 14th, 2026
Registration Deadline	**Regular**: Closes August 4th (free agent registration ends on July 28th) **Late**: Closes August 9th
Free Agent Teams	Will be created on a rolling basis based on registration information and numbers.
Payment Method	Free for cGEM 2026

Registration fees are non-refundable. Fee waivers may be available on a case-by-case basis for students demonstrating financial need. Cases will release on July 20th, 2026.

4. Competition Structure

4.1 Round 1 — Written Proposal (Online)

Timeline: 3-4 weeks from case release to submission deadline

Shortly after the registration deadline, all teams will receive the competition case brief. The case brief will present a real-world problem in one of the following domains:

- Human health and diagnostics
- Environmental remediation and sustainability
- Agriculture and food security
- Industrial biotechnology
- Computational biology and bioinformatics

Teams will submit a written proposal (maximum 8 pages, which excludes references, title page, table of content) outlining their proposed solution. The proposal must include:

1. Problem identification and significance
2. Proposed biological or computational solution
3. Scientific feasibility and supporting evidence
4. Human practices and ethical considerations
5. Implementation plan and scalability
6. References (APA or Vancouver)

4.2 Round 2 = Finalist Presentations (In-Person at U of T)

Timeline: 2–3 weeks after Round 1 results are announced

The top 10 teams from Round 1 will be invited to present at the University of Toronto (St. George Campus, or virtually if needed). Each team will deliver a 12-minute presentation followed by 5 minutes of Q&A from the judging panel in breakout rooms.

Teams may use any presentation tools (PowerPoint, Google Slides, Canva, short video clips, etc.). All presentation files must be submitted 72 hours before the event.

Finalists who are located outside the Greater Toronto Area may present virtually via Zoom. At least 2 team members must be present (in-person or virtual), or the team may be disqualified.

5. Judging Criteria

Proposals and presentations will be evaluated on the following criteria:

Criterion	Round 1	Round 2
Scientific Rigor & Feasibility	25%	25%
Creativity & Innovation	20%	20%
Human Practices & Ethics	15%	15%
Communication & Clarity	20%	25%
Q&A / Defence	10%	15%
Implementation & Scalability	10%	15%

5.1 Judging Panel

The judging panel will consist of:

- iGEM Toronto High School team members
- iGEM University of Toronto team members and alumni
- University of Toronto graduate students in life sciences
- Industry professionals in biotechnology
- Faculty advisors

6. Prizes & Recognition

Placement	Prize
1st Place	All team members get spots on iGEM Ontario High School Team + certificates, mentorship from iGEM University team members, feature spotlight on Instagram and LinkedIn
2nd Place	All team members get spots on iGEM Ontario High School Team + certificates, features on socials
3rd Place	All team members get spots on iGEM Ontario High School Team + certificates, features on socials
Top 10 Finalists	Certificate of Distinction, invitation to present at U of T to expert panel
All Participants	Certificate of Participation, cGEM 2026 digital badge

Additional prizes (e.g. Best Human Practices, Most Creative Solution, Best Computational Approach) may be awarded at the discretion of the organizing committee.

7. Tentative Timeline

Date	Milestone
July 12th, 2026	Registration opens
July 12 (Regular) **August 9th (Late)**	Cases will be released on July 20th, 2026. All materials must be submitted no later than **August 14th, 2026 (11:59 PM)** • Regular registration closes on August 4th; • Late registration closes on August 9th
August 14th, 2026 (11:59 PM)	Round 1 submission deadline
August 20th, 2026	Top 10 finalists announced via email
August 25th, 2026 (11:59 PM)	Presentation files due *(72 hrs before event)*
August 29th, 2026	Round 2: Finalist presentations at UofT • Please check-in from 9:00 AM to 10:00 AM!
Same Day	Winners announced & awards ceremony

All dates are subject to change. Registered teams will be notified of any updates via email.

8. Rules & Code of Conduct

8.1 Academic Integrity

- All work must be original and produced by the team members during the competition period.
- Teams may consult publicly available literature, textbooks, and online resources.
- AI tools (e.g. ChatGPT, Claude) may be used as research aids but must be disclosed. AI-generated text submitted without modification is prohibited.
- Plagiarism of any kind will result in immediate disqualification.
- External mentors, teachers, or professors may advise teams but may not contribute directly to the written proposal or presentation.

8.2 Team Conduct

- All participants are expected to conduct themselves respectfully toward fellow competitors, judges, and organizers.
- Harassment, discrimination, or unsportsmanlike behaviour will not be tolerated and may result in disqualification.
- Disputes will be resolved by the organizing committee. All decisions by the committee are final.

8.3 Substitutions & Withdrawals

- If a team member drops out before Round 1 submission, a substitute may be added with the organizing committee's approval.
- No substitutions are permitted after a team advances to Round 2.
- Teams that withdraw after advancing to Round 2 will forfeit their spot to the next highest-ranked team.

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9. Submission Formatting

9.1 Round 1 Written Proposal

- Maximum 8 pages (excluding references, title page, table of content)
- PDF format only
- Team name and member names on the cover page
- References in APA or Vancouver format
- Submit to forms.gle/Yf8GMBd2qPkqYvzw5