

## GNCTR BASICS & FAQ

### WHAT IS GNCTR?

The Great Northern Concrete Toboggan Race (GNCTR) is Canada's oldest and largest student engineering competition. Teams of undergraduate engineering students from colleges and universities across the country design, build, and race concrete toboggans in a uniquely Canadian winter racing event that combines engineering, teamwork, and school spirit.

### WHAT EXACTLY IS A CONCRETE TOBOGGAN?

A concrete toboggan is a gravity powered vehicle with a concrete sliding surface. Any surface that slides on the snow for most of the run must be made of concrete.

GNCTR Toboggans are designed and fabricated by student teams. All toboggans must meet rigid safety and technical requirements, including:

- A maximum weight of 350 lbs
- Capacity for 5 riders
- A structural frame that acts as a roll cage and can withstand specific crash and rollover scenarios
- Fully functional braking and steering systems
- Ability to withstand a 50-degree tilt without tipping
- And many more!

### WHY ISN'T THE ENTIRE TOBOGGAN MADE OF CONCRETE?

In the early years of GNCTR, toboggans were often fully concrete. Today, strict safety standards require metal frames, roll cages, steering systems, and braking systems to protect riders.

Concrete is still used where it matters most: the sliding surfaces. Ski shape, concrete mix design, and surface finish have a major impact on overall speed, steering and performance.

## HOW FAST DO THE TOBOGGANS GO?

Depending on conditions and design, toboggans have reached speeds of up to 80 km/hr on Race Day.

## HOW MANY PEOPLE ARE IN THAT TOBOGGAN?

Each toboggan carries **five riders**, with **two additional pushers** helping launch the sled from the start line. All riders must meet safety requirements and wear protective equipment.

GNCTR 2026 teams may include up to 26 competitors.

## IS THIS SAFE?

We make this event as safe as a concrete toboggan race can be. Every toboggan undergoes a full safety inspection before racing and is re-inspected between runs.

Dedicated safety crews, judges, and emergency response teams are on site throughout Race Day. Spectator zones are clearly marked and kept well away from racing lanes.

## WHAT IS A DNF?

DNF stands for Did Not Finish. A run may be marked DNF if a team crashes or cannot complete the course safely or within competition rules.

## WHO IS WINNING? HOW IS RACE DAY SCORED?

Race Day contributes approximately **30% of a team's overall competition score**. Teams earn points based on:

- Speed (7%)
- Steering control (7%)
- Braking performance (7%)
- King of the Hill standings (9%)

Beyond Race Day, teams are also evaluated on:

- Technical design and innovation (33%)
- Communication (15%)
- Safety (10%)
- Project management (2%)
- **AND SPIRIT!! (10%)**

Spirit is a unique and valued part of GNCTR, which is why you'll see elaborate displays, chants, costumes, and performances throughout the week.

## CAN KIDS ATTEND?

Yes. Race Day and the Technical Exhibition are free and family-friendly. Children must remain in designated spectator areas and be supervised at all times.

## IS THIS EVENT ACCESSIBLE?

Viewing areas are available near the chalet and base of the hill. Some areas of the slope may be uneven or snow-covered. If you have accessibility questions, please contact the organizing committee or Boler Mountain in advance.

## **WHAT SHOULD I BRING?**

Dress warmly for outdoor conditions. Winter boots, layers, hats, and gloves are strongly recommended. Noise makers and school colours are encouraged.

## **WHAT HAPPENS IF THE WEATHER IS BAD?**

GNCTR is a winter event and runs in most weather conditions. In the case of extreme weather or safety concerns, scheduling updates will be shared on our website and social media channels.

## **IS THERE A SCHEDULE FOR RACE DAY? WHEN SHOULD I ARRIVE?**

Race Day runs from 8:00 AM to approximately 3:00 PM. Spectators are welcome to arrive and leave at any time, though the most exciting head-to-head racing typically happens in the early afternoon during the King of the Hill tournament.

Event timing can change based on weather, run conditions and safety inspections. Announcements will be made throughout the day to keep spectators informed.

## **DO I NEED TICKETS OR TO REGISTER?**

No. Race Day and the Technical Exhibition are free and open to the public. No tickets or registration are required.

## **WHERE SHOULD SPECTATORS PARK?**

Parking is available on site at Boler Mountain. Please follow event signage and staff directions on Race Day.

## **CAN I BRING FOOD OR DRINKS?**

Food and drinks are available for purchase at the Boler Mountain chalet. Please follow venue policies regarding outside food.

## **CAN I TAKE PHOTOS OR VIDEOS?**

Yes. Spectators are welcome to take photos and videos from designated spectator areas. Please stay clear of race lanes and safety zones at all times.

## **WILL THERE BE ANNOUNCEMENTS OR COMMENTARY?**

Announcements will be made throughout the day to indicate teams, events, and race progress. Live commentary is limited to keep focus on safety and race flow.

## **CAN I MEET THE RACERS?**

Absolutely. Teams are happy to talk about their designs, materials, and strategy when they are not racing or in safety inspection.

To learn more about how the machines are designed and built, visit the **Technical Exhibition on Friday, February 6**, where teams showcase their toboggans, engineering work, and creative themes.

## **HOW CAN I GET INVOLVED IN THE FUTURE?**

**University students:** Join your school's GNCTR team or start one. You don't need to be an engineering student to participate.

**High school students:** Talk to current competitors, attend Tech Ex, and keep GNCTR in mind when choosing a university.

**Families and supporters:** Attend events, cheer on teams, and help grow interest in engineering and STEM.

**Alumni and professionals:** Support GNCTR as a sponsor or volunteer your expertise as a technical judge.

**Interested in hosting GNCTR 2028?** Information on bidding will be released in Spring 2026 :)

## **WHERE CAN I LEARN MORE?**

This wasn't enough already??

The official GNCTR 2026 rulebook contains full technical and safety requirements. While it's not light reading, it's available on our website for anyone interested in the details.