



What can travel at 80 km/h, carry five people and is made of concrete?

A concrete toboggan, of course.

UBC Okanagan's School of Engineering hosts the 2015 Great Northern Concrete Toboggan Race from Jan. 21-25, which will see teams racing sleds of their own design down a course at Big White.

The engineering competition is hosted by a different university each year. This year's competition involves about 430 students, 17 university teams, and showcases innovative designs.

Other design criteria for the toboggans include (of course) a running surface made of concrete, a weight not to exceed 300 pounds, and they must be able to withstand an impact at 80 km/h and have braking and steering systems, and a roll cage.

Events will take place at the Delta Grand hotel, a technical exhibition at UBCO, and at Big White.

This is the first time UBCO will host the competition and its third year of competition. Last year, UBCO came home with a second-place finish in London, Ont.

The concrete toboggan races are the oldest and largest engineering student competition in Canada, originating in 1974 in Red Deer, Alta.

Aidan Docherty, Chair of the organizing committee, says while students must put their classroom knowledge to the test while working on construction of their toboggans, the event is also about important, hard-to-teach soft skills such as co-operation, team building and camaraderie.

The competition tests each team's ability to not only design and construct a safe, winning race toboggan, but also their ability to work in a team environment and show school spirit.

Sled performance is judged on factors such as concrete strength, manoeuvrability, and speed. In previous competitions, concrete toboggans have been clocked at speeds over 80 km/h.

"There's often some good crashes and spills," says Docherty. "It's pretty fun to watch."

While the object is to get down the slope as quickly as possible, there is a lot of science behind the sport, with an emphasis on safety. Each team must submit a technical report outlining the performance tests of their sleds. In addition, a safety committee will be on site at Big White to judge the safety of each sled before race eligibility.

All 400-plus competitors will be in costume with their toboggans at the public Tech Expo rally on Jan. 22, 10 a.m. to 3 p.m. at UBCO's EME Building. Or you can catch them on race day, Jan. 24, 8 a.m. to 3 p.m. at Big White's Tube Town.

Source: [Castanet](#)