

Electrium Cup 2023

Rules and Guidelines

By participating in the End of Term Event or entering as a competitor into the Competition, all attendees agree to abide by the following rules and guidelines to ensure the safety and comfort of all attendees, organizers, and the general public.

- Each rider must have proper safety gear (helmet minimum, safety pads maximum)
- Each vehicle must follow local, provincial and federal laws
- Each attendee must be respectful to each other within the competition
- Each team should be truthful about any statistic
- Each rider must be 16 years old or older
- Each attendee must disclose all safety concerns and potential problems to competition organizers
- Each rider must abide by all guidance and competition rules communicated to them by competition organizers
- Each attendee must abide by all guidance communicated to them by competition organizers

Upon any situation where someone is injured or is unsafe, Campus Response Team shall be contacted for assistance.

Technical Requirements for Competitions

Here are the base technical requirements for each vehicle, which are general requirements for anything that can be made.

Mechanical Requirements

- Go at least 20km/h
- Have range of 5km minimum
- Rated for at least 150lbs of weight
- Reliable breaking system that can fully stop the vehicle within 9 meters while going 30km/h

Electrical Requirements

- Motor Controller should be able to do at least 10A continuous current (same as battery)
- Batteries should be able to safely discharge at least 10A
- Batteries must be attached to a battery management system (BMS) that is capable of providing over-current, under-voltage, over-voltage, short circuit, and thermal protection

- The minimum battery capacity of 50Wh must be achieved
- Any motor may not exceed 500W, unless limited by software

General Implementation

- You must implement a way to charge the battery without disassembly
- You must implement a way to turn on the device without disassembly
- The vehicle must be able to turn
- The vehicle must be user-operated and can not be autonomously run
- Every vehicle must follow local, provincial and federal laws
 - We encourage students to follow the restrictions regarding electric bike usage on roads here <https://www.ontario.ca/page/riding-e-bike>. They are not required if it is not intended for road usage (IE Offroad/mountain biking)
 - E-Scooters should follow the following restrictions here: <https://www.ontario.ca/page/electric-kick-style-scooters-e-scooters>