

GNCTR 2017

OFFICIAL
COMPETITION
RULE
UPDATE
#2





Official Competition Rules – Update 2

This document and the following changes, corrections, deletions, information and/or instructions shall be incorporated in the Official Competition Rules.

Replace: 5.2.2

Each Competing Team is required to submit a Technical Report by January 25th.

Replace: 6.2

Teams will have points allotted to their total score based on the criteria and weightings stated in the following table.

Category	Available Points
Toboggan Design	35
Concrete	15
Frame	5
Braking System	5
Steering System	5
Originality & Innovation	5
Reports and Presentations	20
Technical Report	10
Technical Display	5
Technical Presentations	5
Race Results	35
Fastest Run	5
Top Speed	5
Steering Performance	7.5
Braking Performance	7.5
Tournament Ranking	10
Team Spirit	10
Costumes	5
Participation	5
Total Score	100



Add: 6.7

The following scoring criteria will be used to judge the Toboggan Design portion of the competition:

Scoring Category	Weighting
Toboggan Design	
Concrete	
Mix Design Justification	20.0%
Reinforcement Design	
Reinforcement Design Justification	15.0%
Reinforcement Design Calculations	10.0%
Reinforcement Efficiency	5.0%
Design and Construction of Frame Connections to Slabs and Skis	10.0%
Quality of Concrete Components	10.0%
Concrete Mix Performance	
Strength (As Required to Meet Design Requirements)	5.0%
Air Entrainment (As Required to Meet Design Requirements)	5.0%
Slump (As Required to Meet Design Requirements)	5.0%
Consistency (Repeatability) of the Mix Design	5.0%
Test Result Reporting	5.0%
Use of Alternative and Sustainable Materials	5.0%
Maximum Allowable Points:	15
Frame	
Frame Design Justification	20.0%
Frame Design Calculations	15.0%
Frame Design Drawings	10.0%
Frame Design Efficiency	10.0%
Frame Aesthetics	10.0%
Incorporation of Required Safety Features	12.5%
Incorporation of Steering and Braking System	12.5%
Construction Quality	10.0%
Maximum Allowable Points:	5
Braking System	
Brake Design Justification	20.0%
Brake System Calculations	15.0%
Brake System Drawings	15.0%
Brake System Robustness	15.0%
Control System Design and Operation	15.0%
Brake System Performance	20.0%
Maximum Allowable Points:	5
Steering System	
Steering and Suspension System Design Justification	20.0%
Steering Design Calculations	10.0%
Suspension Design Calculations	10.0%
Steering and Suspension Drawings	5.0%
Control System Design and Operation	10.0%
Steering and Suspension System Robustness	10.0%
Ski and Runner Design	15.0%
Steering System Performance	20.0%
Maximum Allowable Points:	5
Originality & Innovation - Concrete Design	
Design Originality	25.0%
Use and Justification of Innovative and Alternative Materials	25.0%
Use and Justification of the use of Sustainable Materials	25.0%
Evolution from Previous Designs (Requires Justification)	25.0%
Maximum Allowable Points:	2.5
Originality & Innovation - Frame Design	
Design Originality	25.0%
Use and Justification of Innovative and Alternative Materials	25.0%
Use and Justification of the use of Sustainable Materials	25.0%
Evolution from Previous Designs (Requires Justification)	15.0%
Incorporation of Team Theme into Toboggan Design	10.0%
Maximum Allowable Points:	2.5



Add: 6.8

The following scoring criteria will be used to judge the Reports and Presentations portion of the competition:

Scoring Category	Weighting
Reports and Presentations	
<i>Technical Report</i>	
Description of Technical Aspects of the Toboggan	15.0%
Description of Toboggan Design Approach	15.0%
Description and Justification of Safety Features	15.0%
Description of Quality Assurance Procedures	15.0%
Completeness of Design Calculations	15.0%
Completeness of Design Drawings	15.0%
General Conformance to Requirements	5.0%
Report Formatting and Presentation	5.0%
Maximum Allowable Points:	5
<i>Technical Display</i>	
Incorporation of Technical Content	30.0%
Incorporation of Team Theme	20.0%
Quality of the Presentation	30.0%
Team Member Knowledge of the Toboggan Design	20.0%
Maximum Allowable Points:	5
<i>Technical Presentation - Concrete</i>	
Technical Content	30.0%
Presentation Quality	40.0%
Presenters Knowledge of Toboggan Design	30.0%
Maximum Allowable Points:	2.5
<i>Technical Presentation - Frame</i>	
Technical Content	30.0%
Presentation Quality	40.0%
Presenters Knowledge of Toboggan Design	30.0%
Maximum Allowable Points:	2.5