

DATE	LOCATION
Friday, March 27, 2020 Mandatory Technical Inspection – Thursday, March 26, 2020	NSCC Ivany Campus

1. Schedule

Thursday, March 26, 2020 – Technical Inspection (Mandatory)

Time	Task
4:00 pm – 6:00 pm	Technical inspection; <ul style="list-style-type: none"> Teams can arrive at any time from 4:00 pm until 6:00 pm for a technical inspection; This inspection is mandatory, and teams must attend an inspection before being permitted to compete.

Friday, March 27, 2020 - Competition

7:00 am	Doors open; <ul style="list-style-type: none"> Teams are welcome to set up and practice before the heats begin; Any teams that have not had a technical inspection must do so at this time. Please note, time will be extremely limited to make any modifications to the robot.
9:00 am	Heats start
12:00 pm	Lunch (provided)
3:00 pm	Robotics contest ends
3:30 pm	Medal presentation

2. Purpose of the Contest

To create an engineering project to encourage individuals with different skill sets to form co-operative teams to design, fabricate and operate a robot. The intent of the challenge is to have teams of students independently designing/fabricating/operating robots capable of completing the competition tasks in competition with other student-fabricated robots. Teams are not allowed to develop or implement strategies based on interfering with their opponent's ability to complete the competition task set.

3. Criteria

4. Number of Stations / Allocations

There is a maximum of twenty-four (24) spaces available, for a total of 12 teams.

Please note:

- There is no limit to the number of students who can help to build the robot, however, only a team of two (2) students will represent their group the day of the contest and be permitted on the play field.
- Schools must be pre-registered, and the individual **students must EACH register online** with Skills Canada – Nova Scotia, **no later than March 6, 2020.**
- Students can register at www.skillsns.ca/registration

5. Skills & Knowledge to be Tested

- Drafting;
- Mechanics;
- Electronics;
- Metalwork;
- Woodworking;
- Communications.

6. Prerequisites

SCNS Prerequisites

- Attend a public or private secondary institute;
- Be between 13 and 21 years of age on January 1 of the year of the Competition;
- Have been earning junior or senior high school credits any time during the current academic year (September to June);
- Be registered as a competitor with Skills Canada – Nova Scotia;
- Possess a Canadian citizenship or landed immigrant status and be a resident of Nova Scotia. Competitors are responsible for verifying this information if requested;
- Have completed and submitted a signed release form by a parent or guardian, if under the age of 19.

7. Equipment & Clothing

a) What Will Be Supplied

- Play Field, including 'Team Home Area;'

- One worktable with access to a 120V (min 1000W) power outlet.

b) What Competitors Must Supply

- Robot;
- Easily accessible fuses;
- Easily accessible kill switch/es;
- Robot Accessories including:
 - Batteries;
 - Controller(s);
 - Battery charger;
 - Spare parts.
- Various tools required to modify and repair robots on-site;
- Safety equipment including mandatory eye protection;
- Pre-inspection checklist;
- Wiring diagram;
- Extension cord and power bar;
- Robot stand.

8. Evaluation & Judging Criteria

The 2020 Skills Canada – Nova Scotia Robotics competition will mimic the rules/set-up of the Skills Canada National Competition (SCNC). Minor modifications have been made at the provincial level to adjust for regional differences; such as; the number of teams competing.

The modifications to the scoring systems is outlined below and will reference the SCNC mobile robotics document to highlight any changes.

Scoring for this year's provincial robotics contest will be slightly different as to align the competition with changes made at the national level. Scoring will occur at two (2) levels, an individual match level and a complete competition level. The competition scoring system will determine the winner of the entire event, the match scoring will affect each team's competition score. The match scoring system will mimic the system outlined in section 5 of the SCNC document. The competition scoring system is outlined below and will replace sections 20/21 of the SCNC document.

The competition scoring will be based on four (4) categories

1. General inspection, robot construction and plans (25%)

- a. Robots will be inspected and judged by the panel based on the following parameters:
 - i. Construction quality;
 - ii. Safety (both electrical and mechanical);
 - iii. Planning and drawings;
 - iv. Report (a short report explaining design is required).

2. General tasks, robot driving and control, robot functionality.
 - a. Robots earn points during the competition round robin for performing certain tasks that would be common to the action in the competition.
 - b. Examples (not a complete list):
 - i. Move forward and backward;
 - ii. Turn both left and right;
 - iii. Climbing the citadel;
 - iv. Descending the Citadel;
 - v. Picking up a ball;
 - vi. Throwing a ball

3. Each game of the round robin will be worth two (2) points for a win, 1 point for a draw and 0 points for a loss.
 - a. Scoring for the matches is outlined in the general instructions.
 - b. Depending on the number of teams it will be a double round robin or a single round robin.
 - c. There will be no playoffs.
 - d. Winning the competition will not guarantee winning the overall championship.

4. Points will be awarded for functionality during the competition.
 - a. No team will be awarded points for repeating functions.
 - b. Each team will be awarded points based on sportsmanship, team comradery and decorum.

9. Additional Information

10. PTC Contact Information

Name	Employer	Email
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