

# INVICTA 2021

WE ARE BACK FOR OUR 20TH CONSECUTIVE YEAR!

## IMPORTANT DATES

Registration opening  
**SEPTEMBER 2, 2020**

Registration deadline\*  
**OCTOBER 16, 2020**

Competition Kickoff\*\*  
**NOVEMBER 2, 2020**

Preliminary Evaluations  
**END OF JANUARY 2021**  
(exact date TBD)

Invicta 2021 Competition  
**3RD WEEK OF FEBRUARY 2021**  
(exact dates and format TBD)

\*Teams registering too close to the deadline might not receive all their material on time for Kickoff due to potential supply chain disruptions given the current situation.

\*\*Virtual event. It is also the official rulebook release date.

## Competition Structure & Evaluation

Students will be evaluated on:

### Option A

- **Game:** The performance of an autonomous robot (not controlled by a handheld remote controller) of their own design capable of interacting with common household objects
- **Robot Design:** The use of STEM principles in building a robot capable of performing the different required challenges
- **Robot Construction:** The real-world application of STEM principles in building a robot capable of performing the different required challenges

### Option B

- **Game:** The feasibility and scalability of their own proof of concept, designed to interact with common household objects
- **Robot Design:** The applied use of STEM principles in the conceptualization of their robot
- **Robot Construction:** The presentation of how they would build their robot (and why) all while working within a budget specified by CRC Robotics

## Common Components to Option A & B

- **Website Design and Content:** The creative design of and marketing content on their website
- **Kiosk:** A TedTalk-style presentation on their journey and the obstacles they overcame
- **Programming:** Their ability to code solutions to solve real-world problems
- **Video:** The creation of either a "socially-distanced" video production or a fully-animated video
- **Tutorial:** Their ability to teach something in a short video

## COSTS

### Mandatory

#### Option A - \$1,080

- Registration costs for Invicta 2021
- 1x CrcDuino robot control board, an Arduino-based robot controller specifically designed for the needs of the CRC Robotics Competition
- 1x Sensor and motor kit

#### Option B - \$480

- Registration costs for Invicta 2021

### Optional

#### CrcDuino Board: \$150 each

Can be used to learn the basics of electronics and robot programming. Can be used on its own, or with the CrcConnect system.

#### CrcConnect: \$250 each

Adds remote control capability to a CrcDuino board. A CrcConnect system can be removed for a CrcDuino and put on another one in less than a minute, with no reconfiguration required.

*Note: Depending on their robot design and material availability at home or school, teams will have to purchase, on their own terms, between \$100 and \$1,000 worth of material to build their robot.*