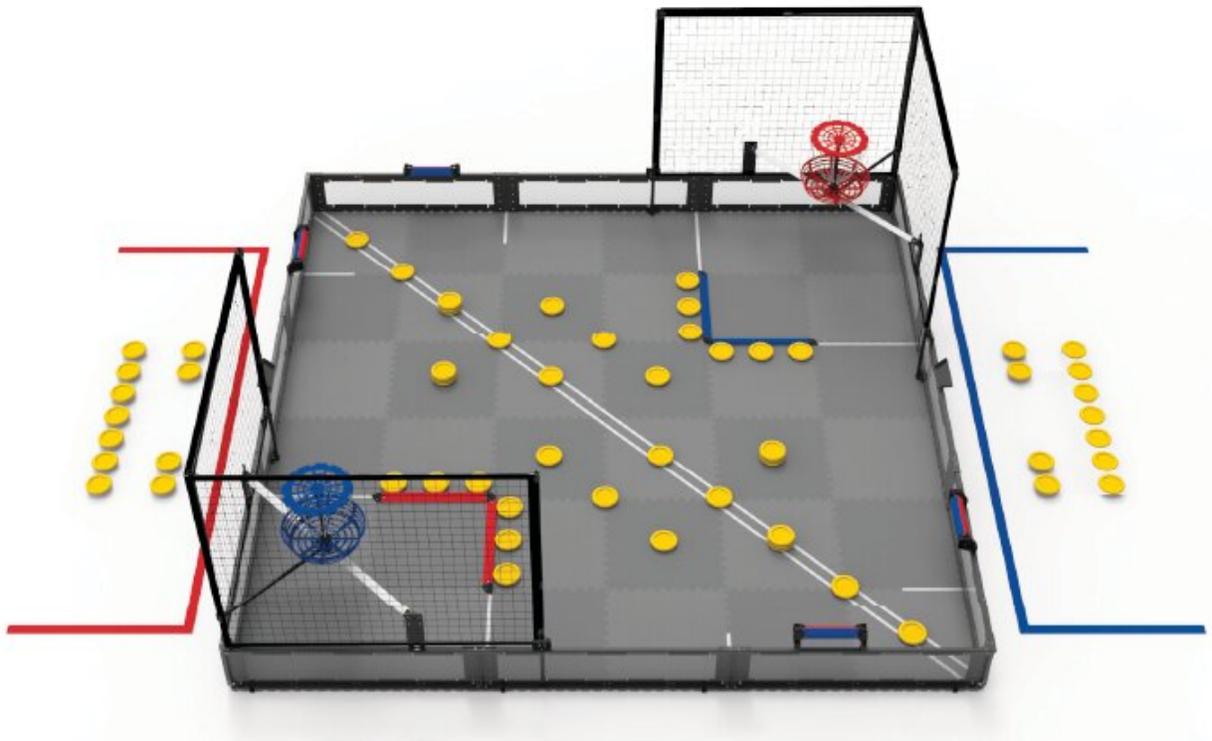


TSA VEX Robotics Competition National Championship at the 2023 National TSA Conference TSA VEX Robotics Competition (TVRC) Competition Guidelines

Overview

The VEX Robotics Competition (TVRC) is an affordable and accessible robotics platform that is used all over the world. Each year, an exciting engineering challenge is presented in the form of a game. TSA VRC (TVRC) teams, with guidance from their teachers and mentors, build innovative robots and may compete year-round in a variety of matches, including a State Competition and the TSA VEX National Championship event held at the annual TSA National Conference.





Competition

For the 2022-2023 season, the VEX Robotics Competition game is 'Spin Up'. Entries must be started and completed during the current school year. VEX Robotics Competition (VRC) Spin Up is played on a 12'x12' square field configured as seen above. Two (2) Alliances – one (1) "red" and one (1) "blue" – composed of two (2) Teams each, compete in matches consisting of a fifteen (15) second Autonomous Period, followed by a one minute and forty-five second (1:45) Driver Controlled Period. The object of the game is to attain a higher score than the opposing Alliance by Scoring Discs in Goals, Owning Rollers, and Covering field tiles at the end of the Match.

There are sixty (60) Discs and four (4) Rollers on a VRC Spin Up Field. Discs can be Scored in the two High Goals, one per Alliance, at opposite corners of the field. Each Disc scored in a High Goal is worth 5 points. However, Robots aiming for the High Goal had better be accurate! Because underneath each High Goal, is a 1-point Low Goal for the opposing Alliance. In addition to Discs, Robots can also spin the four Rollers mounted to the field perimeter. If the area inside of a Roller's pointers only shows one color, that is considered "Owned" by that Alliance. Each Owned Roller is worth 10 points.

As the clock winds down, it's time for the Endgame. At the end of the Match, Alliances will receive a 3 point bonus for each tile their Robots are Covering. So, during the last 10 seconds of the Match, there are no horizontal expansion limits. The Alliance that scores more points in the Autonomous period is awarded with ten (10) bonus points, added to the final score at the end of the match. Each Alliance also has the opportunity to earn an Autonomous Win Point by scoring at least two Discs in Alliance's High Goals, and owning Both Rollers on their side of the field. This Bonus can be earned by both Alliances, regardless of who wins the Autonomous Bonus.



Participants design and build a robot using the engineering design process. Robots should be structurally efficient, capable of scoring in both robot and programming modes of operation, and demonstrate collaboration and communication skills in teamwork matches.

Eligibility

- All TVRC team members must be affiliated with the same TSA chapter for the current school year.
- Teams must affiliate with TSA for the current school year.
- Teams must register as a TVRC team, via RobotEvents.com by March 1, 2023 to be eligible to participate in the 2023 TSA VEX National Championship. Note: Registration on Robot Events is free.
- Participants are limited to two (2) teams per chapter, with a minimum of two (2) and a maximum of six (6) participants per team.

Attire

Competition attire, as described in the National TSA Dress Code, is required for the duration of the event. Teams will be subject to a 20-point deduction in their final Excellence Award Score for any violation.

Procedure

- TSA event registration: TSA state advisors approve and submit eligible TVRC teams for the TSA VEX National Championship event based on advancement guidelines. Additional teams may be waitlisted by TSA state advisors.
- Check-in: Participants check in their robots at the time and place stated in the TSA conference program.
- Inspection: Robots are inspected using [official VRC inspection sheets](#). Students are present for the robot inspection. Robots must pass inspection



in order to be eligible for competition. Repairs and adjustments may be made by students only, as required, in order for robots to pass inspection. Inspection must be completed within the designated timeframe and before a team competes in any component of the competition. Re-inspection of a robot may be ordered at any time throughout the competition by a referee to verify that a robot meets inspection requirements.

- Tournament Play: Follows the rules set forth in the [VRC Spin Up Game Manual](#)
- Excellence Award: Judges review the team's Robot Skills score and the score of the team's submitted Engineering Notebook to determine the best overall TVRC team. Competition attire and team conduct throughout the event will be factors in the Excellence Award.

Additional Information

- To register a TVRC Team, visit: www.RobotEvents.com
- To learn more about the VIQC game, 'Slapshot', visit the [REC Library](#)