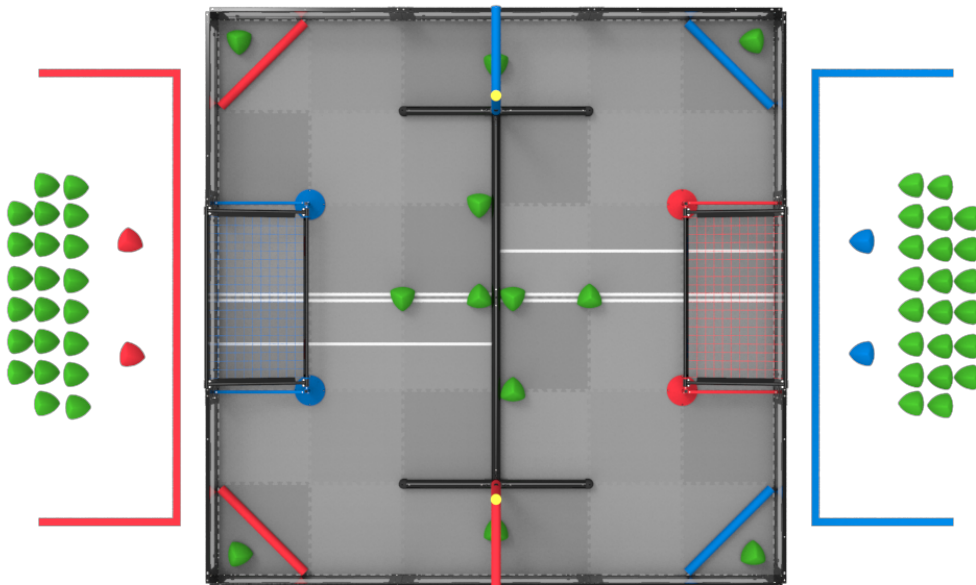


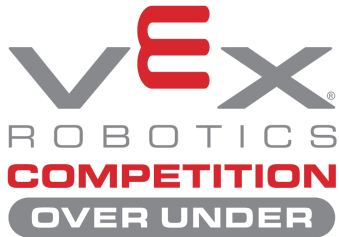
## TSA VEX Robotics Competition National Championship at the 2024 National TSA Conference

### 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 VEX Robotics Competition (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 Robotics Competition National Championship event held at the annual TSA National Conference.





## Competition

For the 2023-2024 season, the VEX Robotics Competition game is 'Over Under'. Entries must be started and completed during the current school year. VEX Robotics Competition (VRC) Over Under is played on a 12'x12' square field. Teams compete in the Robot Skills Challenge, where one robot takes the field to score as many points as possible in 60 second Matches. These matches consist of Driving Skills Matches, which will be entirely driver controlled, and Autonomous Coding Skills Matches, which will be autonomous with limited human interaction. After Robot Skills Challenges are complete, the top 8 teams will play 2 minute long 1v1 matches in a standard single-elimination playoff bracket. These matches begin with a 15 second Autonomous period where robots operate with limited human interaction. The Alliance that scores more points in the Autonomous period is awarded with eight (8) bonus points, added to the final score at the end of the match. After the Autonomous bonus is determined, the match will continue with a 1:45 Driver controlled period.

There are sixty (60) Triballs, two (2) Goals, and two (2) sets of Elevation Bars on an Over Under game field, which is divided by a Barrier. Triballs can be scored in the Goals and in Offensive Zones of the field. Each Triball scored in a Goal is worth 5 points. Each Triball scored in an Offensive Zone is worth 2 points. Robots can traverse the field however they choose, whether that's driving over the dividing Barrier or under either set of Elevation Bars. Triballs can only be removed from an opponent's goal if their two alliance Robots are on the same side of the Barrier, or "Double Zoned."

As the match clock winds down, Robots will try to outclimb their opponents to reach higher Elevation Tiers. At the end of the Match, the Robot that has climbed the highest will receive 20 points; the second-highest Robot receives 15 points; third gets 10; and fourth gets 5. Any Robots that share an Elevation Tier are



awarded the same number of points based on their comparative height to the other Robots in the Match.

For more detailed information and specifications, please refer to the [VRC Game Manual](#). The format described above will be used at the National Conference, but State and local events may use different formats. Please contact your State Advisors for more information.

At the National Conference, Engineering Notebooks will be submitted digitally. For instructions on how to do this, please visit the [REC Library](#). The submission deadline is June 20, 2024.

## **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 May 1, 2024 to be eligible to participate in the 2024 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 Robotics Competition 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.
- 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](http://www.RobotEvents.com)
- To learn more about the VRC game, 'Over Under', visit the [REC Library](#)