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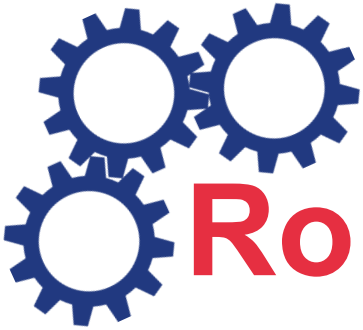

Robotics Handbook

Program Guide for Coaches and Contestants

UIL Robotics Handbook is published annually
by the University Interscholastic League.

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University Interscholastic League
Robotics Handbook

Section 1: Introduction

The details in this handbook expand upon the information in the UIL *Constitution & Contest Rules*. Refer to the Robotics section of the UIL website for additional information and updates, as well as resource links and an archive of state championship results.

From the UIL *Constitution & Contest Rules:*

Section 970: ROBOTICS
(a) THE CONTEST.
  (1) Purpose. Robotics incorporates numerous STEM components that develop beneficial knowledge and skills for students, including mechanical and software engineering, computer programming and mathematics. Participation in robotics fosters creativity and innovation, while teaching students to work collaboratively and to think critically and analytically.
  (2) Format. The contest structure shall be as specified in the current *UIL Robotics Handbook.*
(b) ENTRIES. Each member school shall be allowed to enter contestants as specified in the current *UIL Robotics Handbook.*
(c) QUALIFICATION. Criteria for advancement shall be as specified in the current *UIL Robotics Handbook*. Advancing contestants shall qualify to participate in the UIL Robotics State Championships.

The remainder of this handbook addresses the specifics of contest structure, entries and qualification as indicated in the UIL *C&CR*.

UIL Robotics began as a pilot program during the 2015-2016 school year. Based on the success of the pilot, the UIL Legislative Council approved official adoption of Robotics in October 2017, to be effective beginning with the 2018-2019 school year.

As an officially sanctioned contest, UIL Robotics retains much of the structure used successfully for the pilot program, with a few important differences stemming from the move to official status.

Section 2: Contest Structure

UIL Robotics is a collaboration between the UIL and three established robotics organizations – BEST Robotics, *FIRST* Robotics, and the Robotics Education and Competition Foundation. Each organization has more than 20 years experience offering educational robotics competition in Texas and in other states.

(A) Competitions and Seasons
The BEST Division of UIL Robotics includes a single program of competition with a season that runs entirely in the fall. The BEST season kicks off in early September, progresses through a six-week build schedule, practice days and qualifier meets. and concludes with a championship event in early December.

The *FIRST* Division of UIL Robotics includes two programs of competition – the *FIRST* Tech Challenge (FTC) and the *FIRST* Robotics Competition (FRC). The FTC season begins with a kickoff in September. FTC uses an open build season, with qualifier competitions occurring from November through February leading up to championship events in March/April.

FRC competition begins with a kickoff event in early January followed by a six-week build season. Qualifier meets occur primarily in March, leading up to April championship events.

The RECF-VEX Division includes a single program of competition with a season spread out through the school year. Each year's kickoff happens during the summer, and the build season is open. Qualifier competitions occur in the fall and winter with the UIL championships in early February.

(B) School Participation
Participation in UIL Robotics involves registering a team with BEST, *FIRST* or the RECF and competing in the regularly scheduled qualifier meets offered through those organizations. There are no separate UIL district or regional meets for Robotics.

A school may participate in one or more divisions of UIL Robotics. While most schools select one or two divisions to focus on, it would be possible for a school to qualify for State in all three divisions of competition and earn separate state championship points based on placement in their respective competition group. (For additional information on state championship points, refer to Section 4 of this handbook.)

Students may participate on teams in more than one division of UIL Robotics, dependent on the policies of their schools or school districts. (Refer to *FIRST* Robotics guidelines regarding same-student participation on FRC and FTC teams.)

(C) State Championships
All three divisions of UIL Robotics culminate in state championship events at or near the conclusion of each competition season.

The UIL Robotics State Championships – BEST Division takes place in the fall following the regular BEST qualifier season. The UIL Robotics State Championships – *FIRST* Division will take place in the spring following the regular qualifier meet seasons for FRC and FTC. The UIL Robotics State Championships – RECF-VEX Division takes place in early February, near the end of the VEX V5 qualifier season.

Specific dates, locations and other information for each championship event will be posted on the UIL website, and on the website of the respective robotics organization.

The UIL Robotics State Championship events will be invitational in nature. Refer to Section 4 of this handbook for additional information on advancement structure.

The UIL state championships may be conducted concurrently with other robotics championship events. This structure can provide increased efficiency in scheduling these complex, large-scale events while also reducing missed school time for participants. Concurrent scheduling does not affect the number of teams that qualify for the UIL state championship portion of the event.

Section 3: Representation and Team Structure

(A) General Information
The UIL is a membership organization. A school must be a UIL member in order to compete for UIL state championships.

Any team registration and event entry fees are determined by the robotics organizations and paid directly to those groups. There are no robotics participation fees paid to UIL.

(B) Concurrent Scheduling
A robotics team must represent a UIL member school in order to compete for UIL awards. Guidelines of the robotics organizations may allow for participation by teams that represent groups that are not UIL members (non-member schools, clubs, etc.). Those teams do not qualify to compete for UIL honors but may compete for advancement and awards given by the robotics organizations. Concurrent scheduling means that UIL and non-UIL teams may participate in competition at the same event.

(C) Team Structure
Robotics teams must meet the following criteria in order to compete for UIL championships:

1. The team must represent a single UIL member high school.
2. All team members must be full-time students at the member high school they represent. Exception: composite teams as defined below.
3. For composite teams, the majority of team members must be students in grades 9-12.
4. All team members must be eligible for participation as determined by applicable Texas law and school district policy.

Composite teams are high school-based teams that also include some middle school students. Composite teams that meet the above criteria

are eligible to compete for UIL honors. The team must be high school-based. Middle school-based teams are not eligible to compete for UIL state championships.

Combined teams are teams composed of students who attend different high schools. Combined teams are not eligible to compete in the UIL Awards track *(see Section 4(B) for definition of scoring tracks)*.

Middle school-based teams, combined teams and teams representing non-UIL organizations are not eligible to compete in the UIL Awards track. They may be eligible to compete in the Robotics Awards track, dependent on the guidelines of the robotics organizations.

(D) Competition Groups
Robotics competition is not fully divided into the six different UIL classifications (Conferences 1A-6A). A school's conference is determined based on its enrollment and other factors in the structure of the school.

Teams from all UIL conferences compete together at qualifier meets in their respective areas of the state. At the UIL State Championships, teams are assigned competition groups based on school size and contest-specific criteria. State championships will be awarded for each competition group.

At the championship events, teams in the BEST Division will be organized into three competition groups: UIL Conferences 1A/2A, 3A/4A, and 5A/6A. The FTC contest of the *FIRST* Division will be organized into three competition groups: Conference 6A, Conference 5A ,and Conferences 1A-4A. The FRC contest in the *FIRST* Division will include a single competition group for all teams in the UIL Awards track. The RECF-VEX Division will be organized into four competition groups: Conference 6A, Conference 5A, Conference 4A, and Conferences 1A-3A.

Section 4: Qualification and Awards

(A) Qualifier Meets - General Information
The structure and scheduling of robotics qualifier competitions are determined by the robotics organizations. Contests at those meets are conducted in accordance with the general rules of the *FIRST* or BEST organizations, including the scoring and judging rules for that year's game. There are no separate UIL scoring or judging criteria.

(B) Qualifier Meets - BEST Division
Local competition groups for BEST Robotics are called hubs. Registered teams connect with a hub in their area for participation in kickoff events, practice days and the hub's "game day" qualifier competition.

A UIL-eligible team's BEST Award score will be used to determine invitational selections for the UIL state championships. Consideration will also be given to the number of teams participating in the qualifier.

A single hub may have teams participating from one, two or three of the competition groups outlined in Section 3(D) and may advance teams from each group to the state championships.

(C) Qualifier Meets - *FIRST* Division
In FTC competition, Texas teams participate in a league play format for local qualifiers. Teams advance from their league championships to *regional competition. Qualification to state is based on a team's performance at their regional championship, using standard FTC Advancement Criteria. (Refer to the *FIRST* in Texas website for details).

The top UIL-eligible FTC teams from each of the *FIRST* regions in Texas will receive invitations to the state championships. Regional events may include teams from one, two or three of the competition groups outlined in Section 3(D) and may advance teams from each group to the state championships.

In FRC competition, Texas teams participate through the *FIRST* *District Model. The UIL Robotics State Championships - *FIRST* Division will take place concurrently with the *FIRST* District Championship for FRC. UIL-eligible FRC teams that advance to the championship event will compete for both UIL honors and *FIRST* honors and advancement.

(D) Qualifier Meets - RECF-VEX Division
VEX V5 teams participate in local tournaments in a variety of formats where they earn points in the standings for their VEX V5 *region of Texas, Teams advance to the UIL State Championships based on those regional standings near the conclusion of the local qualifier schedule, as well as the competition group structure outlined in Section 3(D).

**Note that FIRST districts and regions and RECF regions have no relationship to UIL districts and regions.*

(E) Invitational State Championships
UIL Robotics is a state level competition. There are no separate UIL district or regional meets for Robotics.

The UIL Robotics State Championships are invitational events. Qualification is based on a team's performance in the regular qualifier meet season for the robotics organizations as described above.

Invitations will be extended based on a team's scores in qualifier meets, with consideration given to the level of participation at those qualifiers as well as advancing teams in the UIL conference-based competition groups where applicable.

The number of teams invited will be determined based on the parameters established by the contest rules and the limits inherent to the event schedule and venue. Waiting lists will be maintained.

(F) Scoring and Awards
In event structures with concurrent scheduling, two-track scoring will be used. The UIL Awards track will include UIL teams only, with those scores deciding the UIL championships and other awards presented by the UIL. The Robotics Awards track will include all participating teams, with those scores used to determine awards presented by the robotics organization.

UIL Awards will include, at minimum, a state champion team and runner-up team for each competition group. Awards for additional placing teams, as well as other types of awards may also be presented, depending on the format of the specific competition.

(G) Medals
Participants on state champion and runner-up teams will receive medals. Medals may also be awarded for additional placing teams or for other types of awards. Team sizes vary widely in Robotics. Caps may be set on the number of medals available for each team. Schools may purchase additional medals – an order form is available for download on the UIL website.

(H) Academic Championship Points
Section 902(k)(3) of the UIL *Constitution & Contest Rules* specifies points awarded for Robotics toward the overall Academic State Championships.

Points are awarded at the state level only – there are no district or regional points for Robotics. Points are designated through fourth place, to be awarded dependent on the format of the specific competition.

(I) Lone Star Cup Points
Schools also receive Lone Star Cup points for advancing to the UIL Robotics State Championships, and for placing in their competition group. Refer to the UIL website for additional details.

(J) TILF Scholarship Eligibility
Participants on Robotics teams that finish in the top 10 places for their competition group at a state championship earn eligibility to apply for Texas Interscholastic League Foundation scholarships. Refer to the UIL website for additional details.

www.uiltexas.org

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