FTC

FIRST Tech Challenge

Statewide High School Robotics Championship

FIRST Tech Challenge Tournament

Saturday, February 20, 2010 • 10:00 AM - 5:00 PM • UAF Wood Center

SPONSORED BY

FLINT HILLS resources®

CEM UAF College of Engineering & Mines

SpringBoard A program of the Juneau Economic Development Council

bp

UAF UNIVERSITY OF ALASKA FAIRBANKS

SCHEDULE

Please note that this schedule contains only approximate times and is subject to change.

10:00 AM	OPENING CEREMONY
10:30 AM	QUALIFYING MATCHES
12:30 PM	LUNCH
1:00 PM	QUALIFYING MATCHES (continued)
3:00 PM	ALLIANCE SELECTION & ELIMINATION ROUND
4:00 PM	AWARDS CEREMONY

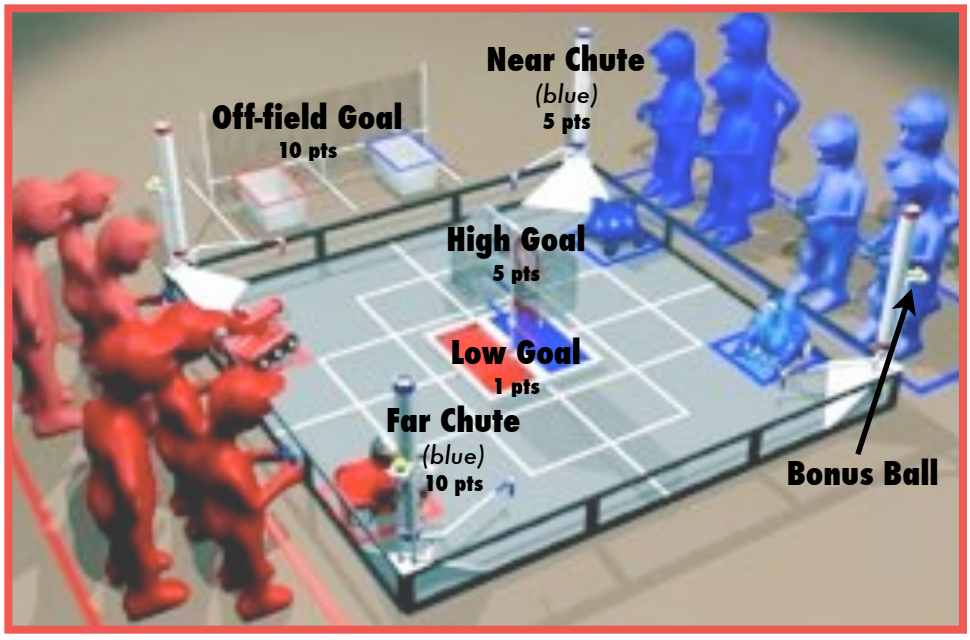
THE GAME - "HOT SHOT!"

Each **match** is 2 minutes and 30 seconds long, and consists of a 30 second **autonomous period** followed by a 2 minute **driver-controlled period**. Matches are played on a playing field set up as illustrated below. Two alliances (red and blue), composed of two teams each, compete in each match. The object of the game is to attain a higher score than the opposing alliance by shooting plastic balls (80 total) into different scoring goals.

During the **autonomous period**, no human control of the robot is allowed. Robots operate and react only to sensor inputs and to commands preprogrammed by the team. During the autonomous period, alliances can score points by releasing balls from their near (5 pts) and far (10 pts) chutes, and by shooting balls into the low (1 pt) and high (5 pts) goals. Any balls still in scoring position after the driver-controlled period will be counted again.

During the **driver-controlled period**, drivers can operate their robots and continue to shoot balls into the low and high goals for points. **End Game**, the final 30 seconds of the match, is the only time that teams are allowed to score in the off-field goals (10 pts) and put their yellow bonus ball (each team is given one) into play. The bonus ball doubles the score of all white balls in the goal into which it lands.

hot! shot!

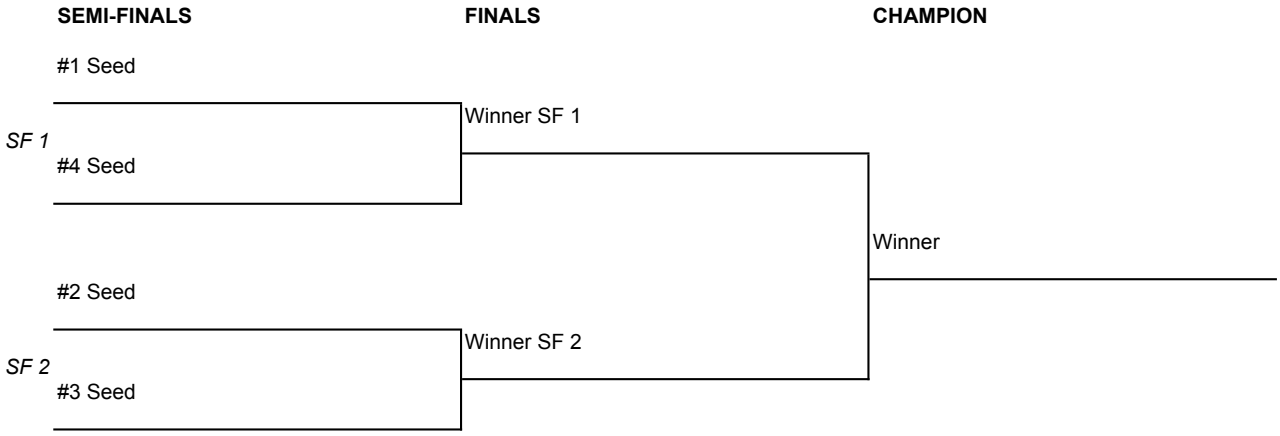


Special Note -- There are many penalties, rules and game intricacies that are not listed above. ***Do you notice teams intentionally scoring for the opposing alliance?*** *There are certain strategic advantages to keeping the score close. Ask one of the teams if you want to learn more or check out the complete game rules at www.usfirst.org!*

THE ELIMINATION ROUND

In the elimination round, the first alliance to win 2 matches moves forward. Alliances are selected in “draft style” where the top four teams from the qualifying rounds serve as captains each select 2 teams each as alliance partners.

Fill in this bracket as we go!



FIRST Tech Challenge AWARD CATEGORIES

INSPIRE - Honors the team that truly embodies the ‘challenge’ of the FTC program. They are ‘role models’ in the FIRST community. This team is a top contender for all other judging categories and is a strong competitor on the field. Inspire award winners are an inspiration to other teams, acting with gracious professionalism both on and off the Playing Field. They receive an automatic invitation to the FTC World Championship in Atlanta, GA.

WINNING ALLIANCE - Awarded to the teams in the winning alliance represented in the final match. The captain team of this alliance will receive an automatic invitation to the FTC World Championship in Atlanta, GA.

FINALIST ALLIANCE - Awarded to teams on the runner up alliance represented in the final match.

INNOVATE - (Rockwell Collins Innovate Award) Celebrates the team that has the most innovative and creative Robot design solution to any or all specific field elements or components in the FIRST Tech Challenge game.

DESIGN - Recognizes the team that best incorporates industrial design elements into their solution, a solution that is both aesthetic and functional.

CONNECT - Acknowledges the team that most connected with their local community and the engineering community.

MOTIVATE - Celebrates the team that demonstrates exemplary team spirit and enthusiasm.

THINK - Awarded to the team that best reflects the “journey” the team took as they experienced the engineering design process during the build season (as demonstrated in their Engineering Notebook).

TEAMS

3081 TMHS Thunderbolts, Thunder Mountain High School, Juneau • 3208, Lathrop High School, Fairbanks • 3259, Lathrop High School, Fairbanks • 3260 Lathrop High School, Fairbanks • 3261 Lathrop High School, Fairbanks • 3263 Lathrop High School, Fairbanks • 3264 Lathrop High School, Fairbanks • 3265 Lathrop High School, Fairbanks • 3266 Lathrop High School, Fairbanks • 3267 Lathrop High School, Fairbanks • 3269 West Valley High, Fairbanks • 3360 Team Caffeine, West Anchorage High School, Anchorage • 3492 Technical T-Birds, West Anchorage High School • 3522 Team Ugruk, Cook Inlet Tribal Council, Anchorage • 3595 Euler's Number Pi the Speed of Light, Alaska Summer Research Academies, Fairbanks • 3645 Highlanders, Highland Tech High, Anchorage • 3655 West Valley High, Fairbanks • 3656 West Valley High, Fairbanks • 3705 ID10T, Community Team, Fairbanks • 3766 TMHS Thunderbirds, Thunder Mountain High School, Juneau • 3792 BRHS Warriors, Bethel Regional High School, Bethel • 3825 Mechalynx, Dimond High School, Anchorage • 3826 Bartlett High School, Anchorage • 3827 Bartlett High School, Anchorage • 3828 Lathrop High School, Fairbanks • 3881 Lathrop High School, Fairbanks • 3882 The Nerds, Hutchison High School, Fairbanks • 3935 Crimson Bears, Juneau Douglas High School, Juneau

FIRST® Learning... never stops building upon itself, starting in elementary schools at age six and continuing through middle and high-school levels up to age eighteen. Students have the opportunity to progress from one level to the next, bringing with them mastered skills and concepts to aid in the challenge of learning new and more difficult ones.

Jr.FLL
Junior FIRST LEGO® League

Grades K-3 (ages 6-9)

The newest program in *FIRST* introduces the youngest students to the exciting worlds of science and technology. Just like FLL, this program features a real-world challenge to be solved by research, critical thinking, and imagination. Guided by adult coaches, students work with LEGO robot-game bricks and moving parts to create solutions and present them for review.

Younger elementary-school students get to

- Design and build challenge solutions using LEGO Education Simple & Motorized Mechanisms Set
- Apply real-world math and science concepts
- Research challenges facing today's scientists
- Learn team-building and presentation skills
- Develop Show-Me posters

FLL
FIRST LEGO® League

Grades 4-8 (ages 9-14)

ages 9-16 outside US and Canada

Introduces younger students to real-world engineering challenges by building LEGO-based robots to complete tasks on a thematic playing surface. FLL teams, guided by their imaginations and adult coaches, discover exciting career possibilities and, through the process, learn to make positive contributions to society.

Elementary and middle-school students get to

- Design, build, and program robots using LEGO MINDSTORMS® technology
- Apply real-world math and science concepts
- Research challenges facing today's scientists
- Learn critical thinking, team-building, and presentation skills
- Participate in tournaments and celebrations
- Earn a place in the World Festival

FTC
FIRST Tech Challenge

High-school

More geographically accessible, FTC is designed for those who want to compete head-to-head using a sports model. Teams of up to 10 students are responsible for designing, building, and programming their robots to compete in an alliance format against other teams. The robot kit is reusable from year-to-year and is programmed using a variety of languages. Teams, including coaches, mentors, and volunteers, are required to develop strategy and build robots based on sound engineering principles. Awards are given for the competition as well as for community outreach, design, and other real-world accomplishments.

High-school students get to

- Design, build, and program robots
- Apply real-world math and science concepts
- Develop problem-solving, organizational, and team-building skills
- Compete and cooperate in alliances at tournaments
- Earn a place in the World Championship
- Qualify for close to $7 million in college scholarships

FRC
FIRST Robotics Competition

High-school

Dubbed a "varsity sport for the mind," FRC combines the excitement of sport with the rigors of science and technology. Under strict rules, limited resources, and time limits, teams of 25 students or more are challenged to raise funds, design a team "brand," hone teamwork skills, and build and program a robot to perform prescribed tasks against a field of competitors. It's as close to "real world" engineering that a student can get. Volunteer professional mentors lend their time and talents to guide each team.

High-school students get to

- Learn from professional engineers
- Build and compete with a robot of their own design
- Learn and use sophisticated hardware and software
- Be exposed to design, project management, programming, teamwork, strategic thinking, and Coopertition™
- Earn a place in the Championship
- Qualify for close to $10 million in college scholarships

All *FIRST* programs practice "Gracious Professionalism"

Contact *FIRST* for more information

WWW.USFIRST.ORG/CONTACTUS

603-666-3906

Stay Informed at JEDC.org!

Check back on the JEDC website for more STEM events and information. See photos and results from today's tournament.

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