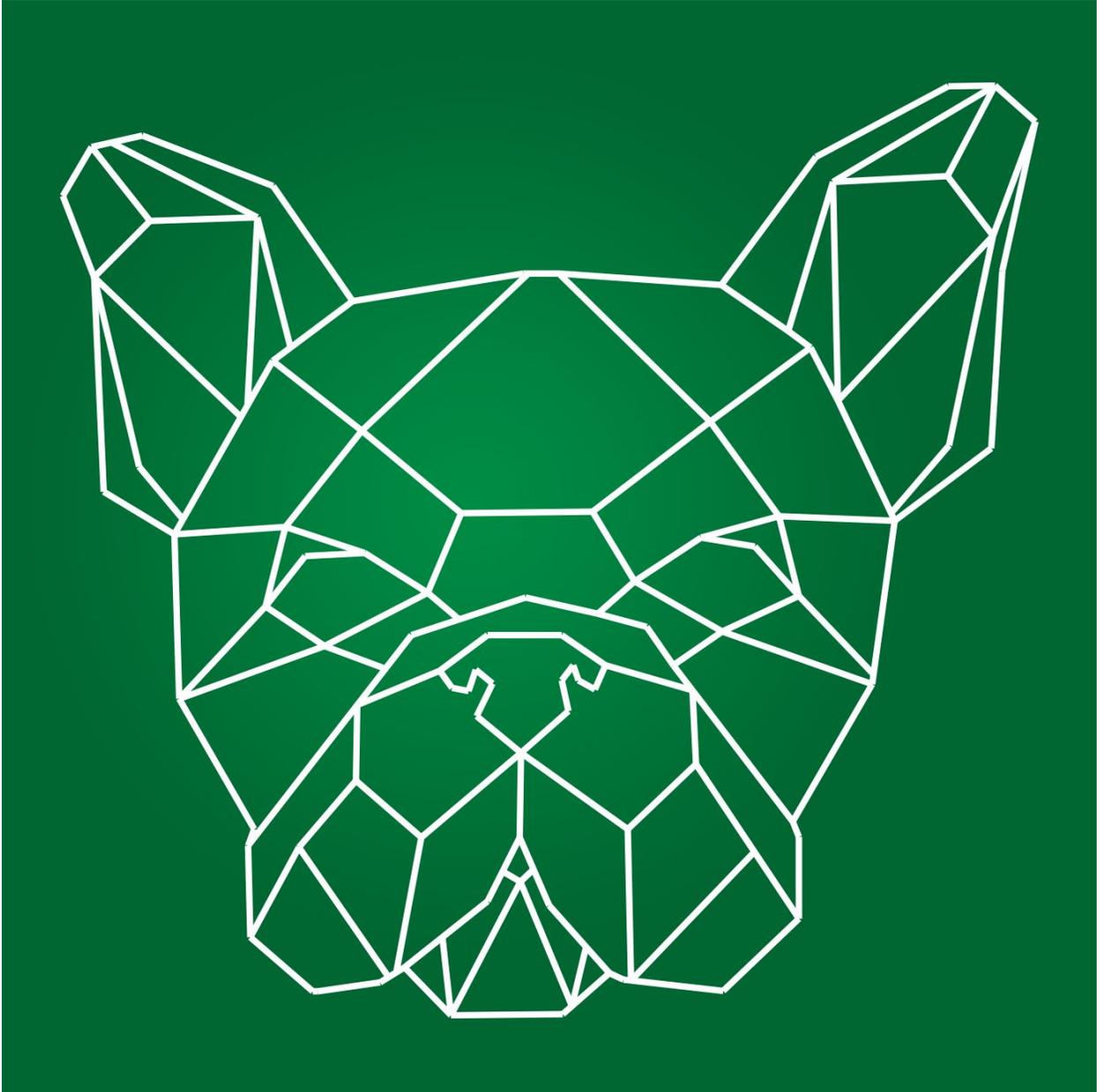


Team Handbook



FRC 6844 - The Provotypes

[What is FIRST?](#)

[Gracious Professionalism](#)

[Coopertition](#)

[Core Values](#)

[What is FRC?](#)

[What is UVSTEM?](#)

[What is the Prototypes?](#)

[History](#)

[Joining the Team](#)

[Communication](#)

[Meetings](#)

[Team Organization](#)

[Business](#)

[Controls and Software](#)

[Design](#)

[Drive Team](#)

[Fabrication](#)

[Scouting and Strategy](#)

[Team Standards](#)

What is *FIRST*?

“FIRST is more than robots. The robots are a vehicle for students to learn important life skills. Kids often come in not knowing what to expect – of the program nor of themselves. They leave, even after the first season, with a vision, with confidence, and with a sense that they can create their own future.”

- Dean Kamen, FIRST Founder

FIRST (For Inspiration and Recognition of Science and Technology) was founded in 1989 to inspire young people's interest and participation in science and technology. *FIRST* designs accessible, innovative programs that motivate young people to pursue education and career opportunities in science, technology, engineering, and math, while building self-confidence, knowledge, and life skills.

Gracious Professionalism

Gracious Professionalism is part of the ethos of *FIRST*. It's a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community.

With Gracious Professionalism, fierce competition and mutual gain are not separate notions. Gracious professionals learn and compete like crazy, but treat one another with respect and kindness in the process. They avoid treating anyone like losers. No chest thumping tough talk, but no sticky-sweet platitudes either. Knowledge, competition, and empathy are comfortably blended.

In the long run, Gracious Professionalism is part of pursuing a meaningful life. One can add to society and enjoy the satisfaction of knowing one has acted with integrity and sensitivity.

Coopertition

At *FIRST*, Coopertition is displaying unqualified kindness and respect in the face of fierce competition. Coopertition is founded on the concept and a philosophy that teams can and should help and cooperate with each other even as they compete.

Coopertition involves learning from teammates. It is teaching teammates. It is learning from Mentors. And it is managing and being managed. Coopertition means competing always, but assisting and enabling others when you can.

Core Values

FIRST expresses the philosophies of Gracious Professionalism and Coopertition through Core Values:

- Discovery: We explore new skills and ideas.
- Innovation: We use creativity and persistence to solve problems.
- Impact: We apply what we learn to improve our world.
- Inclusion: We respect each other and embrace our differences.
- Teamwork: We are stronger when we work together.
- Fun: We enjoy and celebrate what we do!

What is FRC?

“There are two ways to compete in this world; you can rise above you opponent, or you can drag them down. I'd like to think that we're wise enough in the world of FRC to be constantly evaluating ways to learn from others in an effort to rise above.”

- Karthik Kanagasabapathy, 1114

“FIRST isn't about building robots. I know. But I also know that Inspiration comes in a lot of flavors and I, for one, believe it is a lot easier to inspire my kids when we set 'playing after lunch on Saturday' as a worthy team goal.”

- Joe Johnson, 88

We call *FIRST* Robotics Competition the ultimate Sport for the Mind. High-school student participants call it “the hardest fun you'll ever have.” There are more than 3500 teams hailing from the United States, Canada, China, Mexico, Brazil, and all over the world.

Under strict rules, limited resources, and an intense six-week time limit, teams of students are challenged to raise funds, design a team “brand,” hone teamwork skills, and build and program industrial-size robots to play a difficult field game against like-minded competitors. It's as close to real-world engineering as a student can get. Volunteer professional mentors lend their time and talents to guide each team. Each season ends with an exciting *FIRST* Championship.

What is UVSTEM?

Sustaining an FRC team is really hard! It requires raising money; gathering interest and support from students, parents, administrators, and sponsors; managing a project involving a large group of students of varying abilities, interest levels, motivations, and distractions; managing a group of volunteer mentors with different abilities, interest levels, motivations, and distractions; running a 6 week engineering design crash course; and orchestrating all of the logistics necessary to sustain a team through a build and competition season. I have never been on a team where any of these tasks were easy and without lots of frustration and many headaches. You'd have to be crazy to do this year after year without some sort of rewarding experience."

- Jared Russell, 254

The Utah Valley STEM Foundation is a 501(c)(3) nonprofit organization that supports the expansion of *FIRST* in the Utah Valley. It was organized in the summer of 2017 by Brennon Brimhall, Mitchell Clarke, and Stuart Myers.

As of this writing, the following serve as members of the board of directors:

- Ken Angell
- Brennon Brimhall
- Mitchell Clarke
- Sierra Clarke
- Jacob Dean
- Stuart Myers

As of this writing, the following serve as officers:

- Mitchell Clarke, President
- Stuart Myers, Vice President
- Sierra Clarke, Treasurer

Our robotics team, the Provotypes, is a program that is operated by the UVSTEM Foundation.

What is the ProvoTypes?

"What isn't fun about watching a robot hang tubes? I love watching my team do it!"

- Michael Corsetto, 1678

Team 6844, the ProvoTypes, is an FRC team based out of Provo, UT. It is not directly associated with any single high school or school district; rather, it is open to the community and is the flagship program that UVSTEM operates.

History



A picture of the team at the 2018 Utah Regional.

The team was founded in the summer of 2017 by alumni of team 20, 1318, 2169, and 3145, and students from Provo High School. During the 2018 season, students from Timpview High School and Karl G. Maeser Academy joined; additionally, alumni from 2220 and 2478 also became mentors. The team competed at the 2018 Utah Regional and won the Rookie All Star Award, one of the highest honors at a regional competition. The award qualified the team to compete at the 2018 FIRST Championship in Houston, where they won the Rookie Highest Seed Award for the Carver-Newton Sub-Division.

Joining the Team

Student membership on Team 6844 is open to all high school aged students in the Utah Valley area. Parents of students, alumni of other FRC teams, industry experts, and other adults in the Utah Valley area are encouraged to join the team as mentors.

All interested students are invited to attend informational meetings at the beginning of each school year and participate in preseason activities.

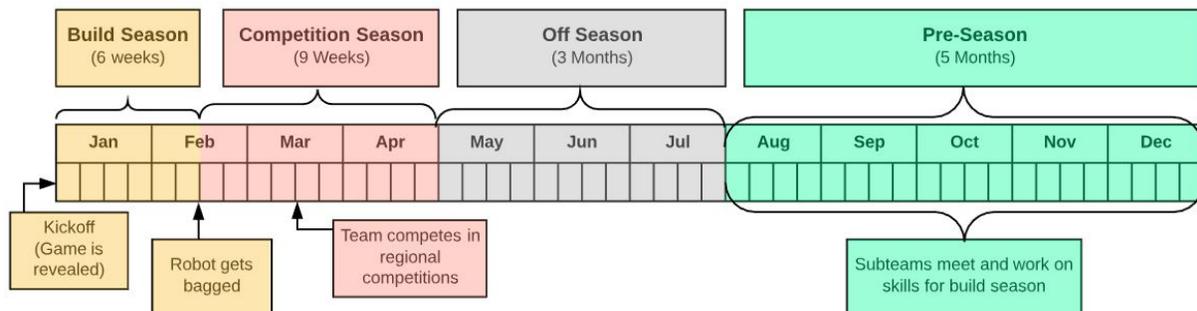
Team members are required to abide by Team Standards.

Due to the high cost of materials, registration, and other fees associated with FRC, students are expected to contribute or fundraise \$75 in team dues. (This may be waived based on a student's financial status and ability to pay.) This contribution is tax-deductible. In return, students are provided with a team jersey and are eligible to attend local events with the team. If the team attends other events that require travel, students are expected to cover associated travel costs. Please contact team leadership if you are financially unable to meet this requirement. Students who are in good standing with the team may be eligible for need-based scholarships.

Communication

Team communication happens via Slack and email. Team members are required to have an active email address that is registered with the team. Further, team members are required to create a free Slack account. Parents also have the option of creating a Slack account to have access to the team's communication.

Meetings



Team meetings during the preseason (September to December) typically take place twice a week on Tuesdays and Thursdays from 7pm-9pm. During the build season (January to February), team meetings typically take place daily from 7pm-9pm on weekdays and 9am-5pm on Saturdays. During the competition season (March-April), the team continues to meet often, meeting twice a week on Tuesdays and Thursdays from 7pm-9pm as a minimum. During the offseason (May-September), team meetings typically take place weekly on Tuesdays from 7pm-9pm.

Meetings are typically held at Hall Labs (3000 Sierra Vista Way) in south Provo.

Team Organization

“Winning a match is not something a robot does, winning is a team effort that requires the cooperation of dozens of individuals.”

- Andrew Schreiber, 27/125/323

The team is organized into different subteams that focus on a particular aspect of running the team. Team members are encouraged to contribute to multiple subteams as interested and as the needs of the team dictate.

Business

The business team oversees the team’s finances, social media accounts, and outreach to the community. The business team also oversees preparation and submission for awards. Members of this subteam learn and apply skills in accounting, finances, graphic design, marketing, photography, videography, writing, and related areas.

Controls and Software

The controls and software subteam oversee all team-produced software, including software for the robot and other team uses. Members of this subteam learn and apply skills in math, physics, programming, software engineering, and related areas.

Design

The design team oversees the mechanical and electrical design of the robot. They learn and apply skills in CAD, drafting, drawing, electrical engineering, mechanical engineering, math, physics, prototyping, and related areas. They work closely with the fabrication team.

Drive Team

Per the competition manual, 3-5 students and 0-1 mentors participate as members of the drive team and operate the robot in competition matches. The exact details vary from year to year. Members of the drive team are required to demonstrate firm commitment to the team, especially with attendance and attitude. Due to the limited number of positions available, membership on this subteam requires completing an application that includes a drive test, rules test, and responses to essay questions. Responses will be reviewed by team leadership, and their decisions and selections are final.

All are encouraged to apply.

Fabrication

The fabrication team oversees the mechanical and electrical construction of the robot. They learn and apply skills in automation, CAD, construction, electrical engineering, manufacturing, math, mechanical engineering, prototyping, and related areas. They work closely with the design team.

Strategy and Scouting

The scouting and strategy team supports the design, drive, and fabrication teams by carefully analyzing the game to determine robot requirements and analyze matches to determine the best way to win competitions. Additionally, they oversee the team's scouting operations at competition, where we collect data for analysis. All team members are expected to contribute to the strategy and scouting effort.

Team Standards

“By affiliating yourself with a team, you are representing them at all times, as you are a member and part of that team.”

- Chris Picone, 2791

All members of the team (both students and mentors) are required to observe team standards. Strive to represent the team by keeping the highest standards of conduct.

Failure to do keep these standards may result in verbal or written warnings, suspension of team membership, dismissal from the team, and/or referral to law enforcement officials.

The goal of our team standards is to allow us to have fun while being safe, being respectful of others, and maintaining our team’s image. If you have questions about a team standard that we’ve listed, please ask team leadership for clarification.

Attitude

- You are responsible for the choices you make, good and bad. Remember that we are free to choose our course of action but not the associated consequences.
- Come ready to learn, ready to work, ready to compete, and ready to have lots of fun.
- Be trustworthy and respectful, even to those who are not part of our team. We expect this from both students and mentors.
- If you have a question, ask it! Learning is the name of the game.

Attendance

- Strive to attend all team meetings as circumstances allow. Family and schooling should be prioritized before robotics.
- Some meetings may be designated all-hands meetings; attendance at these meetings is mandatory. Some all-hands meetings may also require the attendance of a parent or guardian if you are a student.
- All team members are expected to participate at team outreach activities throughout the year. Similarly, all team members are expected to participate in team fundraising activities.

Language

- How you choose to communicate says a lot about you. Speak kindly and positively about others.
- Choose not to insult others or put them down, even in joking. Avoid gossip.
- Do not use profane, vulgar, or crude language or gestures. We’re serious about this.

Dress, Grooming, and Hygiene

- Team members are expected to wear activity-appropriate clothing and footwear. This helps keep team members safe, especially when using machinery.
- Team members are expected to wear team jerseys at competitions and outreach events.
- Please be considerate of others and use deodorant. Shower daily. This is especially important at competition.

Safety

- Your safety, and the safety of others around you, is of the utmost importance. Always be aware of your surroundings.
- Mentors are required to have an annual background check that is on file with the team.
- Only use machine shop equipment or power tools if you have been cleared to do so. This typically means that you've had a safety briefing for the tool you'd like to use, are wearing closed-toed shoes, have hair tied back, and are wearing safety glasses. Only use the tool in accordance with team policies.
- Promptly report any injuries to team leadership.
- You are required fill out a waiver to participate on the team. This waiver also asks you to document your medical history. If you experience a change in your health, this needs to be communicated to team leadership.
- At competitions, students are required to stay with the team. If approved to be elsewhere, they must travel in groups and carry a cell phone, checking in periodically. We highly suggest that all team members bring and charge a cell phone for communication at competitions.
- Team members may only drive other team members if cleared to do so by team leadership.

Team Funds

- Team funds are only to be used to pay for official team purposes. Official team purposes may include robot parts, outreach events, and team activities.
- Team members may request reimbursement for team purchases that were made using personal funds. These reimbursement requests should be pre-approved by team leadership and require the purchaser to turn in their receipt. Do not mix personal and team expenses in the same purchase/receipt.
- Do not do anything that might jeopardize the team's nonprofit status.

The ugly stuff

- Some team members, such as team leadership, may be entrusted with information that is deemed confidential (such as a team member's financial status) or proprietary (including information or designs given to us by other teams). Violation of that trust is unacceptable. Depending on the assessment of team leadership, team members may be warned, suspended, or dismissed.
- The team has a zero-tolerance policy for substance abuse, regardless of when or where it occurs. Team members who violate this policy will be immediately dismissed and

referred to law enforcement officials. We do not allow tobacco, alcohol, or illicit drugs at team events or on team sites.

- The team has a zero-tolerance policy for harassment, bullying, physical violence, or abuse. Team members who violate this policy will be immediately dismissed and, if applicable, referred to law enforcement officials.
- Mentors are not to be left alone with a single student without prior approval from both their parent/legal guardian and team leadership. The team has a zero-tolerance policy for sexual misconduct. Any accusation of sexual misconduct will result in immediate dismissal of the offending party and referral to law enforcement officials.
- If a team member is suspended or dismissed while traveling with the team, they must immediately travel home. They, or their parent/legal guardian, are responsible to cover any and all costs that may incur.