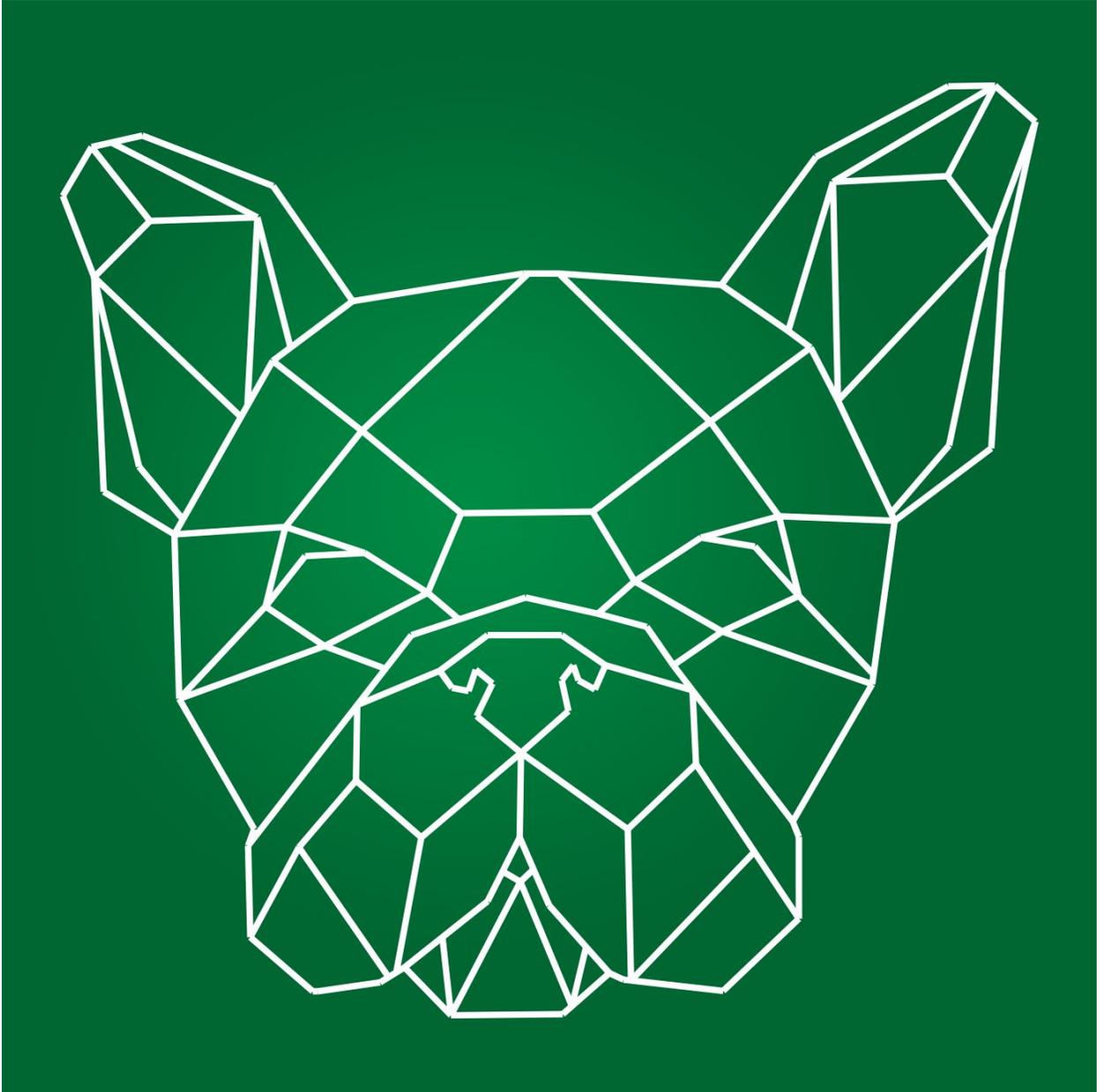


# Team Handbook



FRC 6844 - The Provotypes

[What is FIRST?](#)

[Gracious Professionalism](#)

[Coopertition](#)

[Core Values](#)

[What is FRC?](#)

[What is UVSTEM?](#)

[What is the Provtotypes?](#)

[History](#)

[Joining the Team](#)

[Communication](#)

[Meetings](#)

[Team Organization](#)

[Business](#)

[Controls and Software](#)

[Design](#)

[Drive Team](#)

[Fabrication](#)

[Strategy and Scouting](#)

[Team Standards](#)

[Team Member Contract](#)

# 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. 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.

In the 2019 season, mentors from 159, 611, 971, and 3620. The team competed at the 2019 Utah Regional where they were the first pick of the #3 alliance. The team advanced to the regional semifinals, where they were eliminated by the event finalists in some close matches.

## 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 (students and mentors) must have a valid Team Contract, Medical History, and Waiver on file. These are available in the back of this document.

Team members are required to abide by Team Standards.

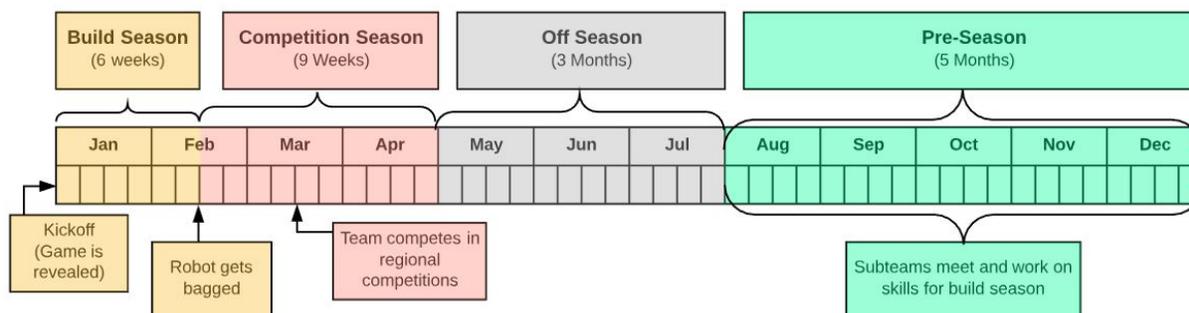
Due to the high cost of materials, registration, and other fees associated with FRC, students are encouraged to contribute or fundraise \$150 in team dues. (This may be waived based on a student's financial status and ability to pay.) This contribution is tax-deductible. Students are provided with a 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 primarily via Slack. 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.

Occasionally, announcements will be disseminated through email. Thus, team members are also required to have an active email address that is registered with the team.

## 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 6pm-9pm on weekdays and 10am-6pm on Saturdays. During the competition season (March-April), the team continues to meet often, meeting at least twice a week on Tuesdays and Thursdays from 6pm-9pm, with more hours as needed. 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. See Slack for details.

## Commitment

Robotics is an intense sport. Team members typically spend upwards of 150 hours engaged in team activities, both inside and outside of formal meetings. It is important that team members prioritize attendance to the extent possible, though we do ask that robotics is prioritized after family and school. We find that team members who attend more frequently gain much more out of their experience than those who attend infrequently.

Over the course of the entire year-long season, we expect team members to spend no less than 100 hours in team activities. Consistent attendance at team meetings will more than cover this requirement; the six week build season alone generates about 150 hours of team meetings.

On our team, we distinguish between three complementary kinds of team activities: engineering, outreach, and administration. We expect that students will engage in at least 25 hours of engineering *and* 25 hours of outreach. To this end, team members are expected to log their hours with team leadership, note what was accomplished during that time, and identify which category the hours fall under.

Engineering hours come from activities where team members design, prototype, fabricate, program, and build the robot. Engineering hours also come from preparing for these activities, like shop training. Strategic analysis, scouting, and similar activities also fall under this category. For most team members, time spent at competitions also counts as engineering hours (such as being on the pit crew, drive team, scouting, etc.).

Outreach hours come from activities where the team is interacting with the community, including demonstrations, mentoring other teams, representing the team at the Freedom festival, preparing and presenting the team Chairman's submission, fundraising, making team media, and getting sponsors.

Administrative hours come from leadership meetings where the topics discussed do not neatly fit into an engineering or outreach category. They are typically not accrued by students.

In many cases, these categories have overlap. For example, if a team member is working on a programming presentation for other FRC teams, it may not be clear whether this is an engineering or outreach activity. Context is vital in these cases; please consult with team leadership if you are unsure of how you should categorize it.

# 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 a 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 strategy and scouting 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.”*

*- Chris Picone, 228/2791*

*“The brick walls are there for a reason. The brick walls are not there to keep us out. The brick walls are there to give us a chance to show how badly we want something. Because the brick walls are there to stop the people who don’t want it badly enough. They’re there to stop the other people.”*

*- John V. Neun (JVN), 20/229/148*

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. Keep in mind that team membership is a privilege – not a right – and that right comes with corresponding duties and responsibilities.

Team members (students and mentors) must have a valid Team Contract, Medical History, and Waiver on file. These are available in the back of this document.

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.

Note that this list of team standards is not intended to be exhaustive or comprehensive. While we’ve tried to anticipate the most common issues, team leadership reserves the right to use their best judgement in addressing unforeseen concerns and/or adjusting disciplinary action as deemed appropriate.

## *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. The team is not a babysitting service.
- 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.
- Keep an open mind and be respectful of the opinions of others. Chances are there’s a way to iterate an idea or belief to make it even better.

### *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 and about our team. Speak kindly and positively about and to others. Choose to build people up.
- 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, as well as personal protective equipment (PPE). In general, please come to meetings with closed-toed shoes. 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 to fill out a waiver to participate on the team (attached). 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 and relevant forms updated.
- 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 must 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.
- Team members are required to participate in a yearly Youth Protection Program (YPP) training. Adult team members are required to have a background check on file with the team.
- The team has a zero-tolerance policy for substance abuse, regardless of when or where it occurs. Team members who violate this policy may be immediately dismissed and referred to law enforcement officials. We do not allow tobacco, or alcohol, or illicit drugs at team events or on team sites.
- The team has a zero-tolerance policy for harassment, bullying, violence, or abuse of any kind. This includes physical abuse, verbal abuse, and related behavior. Team members who violate this policy may be immediately dismissed and, if applicable, referred to law enforcement officials.
- A single mentor is 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 may 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.

# Team Member Contract

By signing below I acknowledge and understand all points listed below:

- I have read the Team Handbook and agree to comply with all policies.
- I understand that in addition to this Team Contract, I am required to complete a Team Waiver, a Team Medical History, and (if a student) pay my team dues before being recognized as a team member.
- Participation in the program requires attendance at mandatory events; I will attend mandatory events.
- The equipment used during the construction of the robot can cause serious harm or injury if not used correctly. I understand that members are not permitted to use any piece of equipment until they have been instructed on its safe use and are not permitted to use any piece of power equipment without adult supervision.
- I agree and consent to allow my photographs, name, or comments to appear in media related to the Provotypes.
- I understand that violation of any of the policies above may result in disciplinary action, including dismissal from the team.

Team Member Name: \_\_\_\_\_

Team Member Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Shirt Size: \_\_\_\_\_

Team Member Phone: \_\_\_\_\_

Team Member Email: \_\_\_\_\_

Where my parents work (optional): \_\_\_\_\_

*If the team member is a minor, the following section must be completed:*

By signing below I acknowledge, understand, and give my consent for everything my ward has signed for above. Additionally, I give permission for my ward to be transported by adult team members cleared by team leadership.

Parent/Guardian Name: \_\_\_\_\_

Parent/Guardian Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Parent/Guardian Phone: \_\_\_\_\_

Parent/Guardian Email: \_\_\_\_\_

As a parent, I would like to be added to slack: Yes / No

# Team Member Waiver of Liability and Consent

The undersigned understands that participating in robotics is voluntary and not a required part of the high school curriculum. Undersigned hereby voluntarily releases, discharges, waives and relinquishes any and all actions or causes of action for personal injury, property damage or wrongful death occurring to him/herself arising as a result of engaging or receiving instructions in robotics or any activities incidental thereto wherever or however the same may occur and continue. The Undersigned does for him/herself, his/her heirs, executors, administrators and assigns hereby release, waive, discharge and relinquish any action or causes of action, aforesaid, which may hereafter arise for him/herself and for his/her estate, and agrees that under no circumstances will he/she or his/her heirs, executors, administrators and assigns prosecute, present any claim for personal injury, property damage or wrongful death against Utah Valley STEM Foundation, Team 6844: The Prototypes, and any other organization or sponsor including its officers, agents or employees for any of said causes of action, whether the same shall arise by the negligence of any of said persons, or otherwise.

It is understood by the student and his/her parents or guardians that the team nor any of its affiliates assumes no liability for injuries incurred in program-related activities. Furthermore, UVSTEM assumes no responsibility or liability for transporting students to and from events or activities. It is further understood that the above-named student may travel by automobiles operated by team leaders, adult volunteers, or other licensed drivers, including students according to the policies outlined by the Youth Protection Program and UVSTEM.

Robots are large, powerful, fast, and unpredictable machines. There are risks inherent in participating in robotics, including the risks inherent in the construction of robots as well as in working with hand and power tools, electrical connections, traveling to and from events, and participating in public competitions. These risks include the risk of bodily harm (including without limitation, death) and property damage. Being fully cognizant of the risks of designing, building and testing robots and participating in competitions, I hereby assume those risks. It is understood

that the dangers and risks of participating in robotics may result not only in serious injury, but in a serious impairment of my future abilities to earn a living, to engage in other business, social and recreational activities, and generally to enjoy life.

Any injury must be reported to team leadership before leaving the place of injury so proper report forms may be filled out. All medical, hospital, ambulance or other bills shall be charged to the team member (or, if a minor, parents or guardians) and shall be considered the bill of the team member (or, if a minor, the bill of such parents or guardians).

The Undersigned acknowledges that he/she has read the foregoing paragraphs, has been fully and completely advised of the potential dangers incidental to engaging in robotics and is fully aware of the legal consequences of signing this document.

I realize participation in robotics is a privilege and acknowledge the rights of team leadership to exercise rules and regulations for the good of the team.

Team Member Name: \_\_\_\_\_

Team Member Signature: \_\_\_\_\_

Date: \_\_\_\_\_

*If the team member is a minor, the following section must be completed:*

I hereby give my consent for the above-named student to participate on a FIRST Robotics team 6844. I authorize the student to be released from school as required in order to participate in robotics. In case this student becomes ill or is injured, mentors and/or coaches are authorized to have the student treated and I authorize the medical agency to render treatment.

Parent/Guardian Name: \_\_\_\_\_

Parent/Guardian Signature: \_\_\_\_\_

Date: \_\_\_\_\_

# Medical Information Sheet

Team Member Name: \_\_\_\_\_

Gender (Circle One): M / F

Address: \_\_\_\_\_

Cell Phone: \_\_\_\_\_

Home Phone: \_\_\_\_\_

Student Email: \_\_\_\_\_

**Parent / Guardian Name (1):** \_\_\_\_\_

Relationship: \_\_\_\_\_

Address (1): \_\_\_\_\_

Parent (1) Cell Phone: \_\_\_\_\_

Parent (1) Work Phone: \_\_\_\_\_

Parent (1) Email: \_\_\_\_\_

Parent (1) Occupation / Company: \_\_\_\_\_

**Parent / Guardian Name (2):** \_\_\_\_\_

Relationship: \_\_\_\_\_

Address (2): \_\_\_\_\_

Parent (2) Cell Phone: \_\_\_\_\_

Parent (2) Work Phone: \_\_\_\_\_

Parent (2) Email: \_\_\_\_\_

Parent (2) Occupation / Company: \_\_\_\_\_

**Emergency Contact (other than parent / guardian):** \_\_\_\_\_

Emergency Contact Relationship: \_\_\_\_\_

Contact Cell Phone: \_\_\_\_\_

Contact Email: \_\_\_\_\_

**Family Doctor:** \_\_\_\_\_

Phone: \_\_\_\_\_

Other doctors/specialists: \_\_\_\_\_

Medications which my child takes on a regular basis: \_\_\_\_\_

Allergies (note if life threatening): \_\_\_\_\_

My child has a prescription for an "Epi-Pen" (Circle One): Yes / No

My child carries an "Epi-Pen" with them at all times (Circle One): Yes / No

Other Medical Conditions / Information: \_\_\_\_\_

**While traveling with the team, I give permission for my child to take:**

Tylenol    Ibuprofen    Benadryl    Tum and/or Pepto Bismol    Other: \_\_\_\_\_

I give permission for Team 6844 coaches to grant permission to medical personnel to treat my child: Yes / No

**Insurance Information**

As parent/guardian of \_\_\_\_\_, I hereby certify that he or she (Please check appropriate block):

Is covered by an insurance policy providing comparable coverage.

Policy Number: \_\_\_\_\_

Insurance Company: \_\_\_\_\_

Is not covered by insurance, but I hereby certify that I have been notified that my son/daughter is participating in an activity where accident/medical insurance is recommended and considered prudent.

Team Member Name: \_\_\_\_\_

Team Member Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Parent/Guardian Name: \_\_\_\_\_

Parent/Guardian Signature: \_\_\_\_\_

Date: \_\_\_\_\_