

FRC Team 1678: Citrus Circuits

Student Team Handbook

Team Leadership
2018-19

About the handbook

This handbook is intended to contain the information needed for all 1678 team members to understand the administrative and logistical procedures for FRC Team 1678: Citrus Circuits. It is updated yearly by core leadership to accurately represent current standards.

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1 About FIRST

FIRST, For Inspiration and Recognition of Science and Technology, is a non-profit organization dedicated to inspiring young people. Through programs such as the FIRST Robotics Competition and FIRST Lego League, students are emboldened to excel in the areas of science, technology, engineering, and mathematics. FIRST was founded in 1989 by Dean Kamen (inventor of the Segway and the insulin pump) and has since become a large international organization reaching thousands of students from elementary school through high school. For more information, visit <https://www.firstinspires.org/>.

1.1 About FRC

FRC, short for FIRST Robotics Competition, is FIRST's oldest robotics program. It is designed to provide a rigorous engineering challenge to high school students as well as teach leadership, collaboration, and project management. Over three thousand teams contain anywhere from fewer than ten to over one hundred students with guidance and support from adult mentors. Each year, every FRC team builds a robot in the six-week "build season" to compete in a game released in early January.

1.2 Gracious Professionalism

As part of its mission to encourage student leadership and collaboration through yearly robotics challenges, FIRST promotes Gracious Professionalism as one of its core values in all levels of competitions. Their website describes this ideal as follows: "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."

1.3 Coopertition®

FIRST extends their philosophy through their value of Coopertition®, which "produces innovation. 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." (FIRST Website, <https://www.firstinspires.org/about/vision-and-mission>).

2 About the team

Team 1678: Citrus Circuits is an FRC team. Team members are 9th–12th graders in the DJUSD schools. Our program is centered around three core tenets: a hands-on project-based learning environment, a thriving presence in the competitive scene, and a focus on reaching out and expanding the influence and impact of STEM in our community. These three ideas - education, competition, and outreach - form the three pillars of our program, and serve as the basis for our mission and vision statements.

2.1 Mission, Vision, and Motto

2.1.1 Vision Statement

Team 1678: Citrus Circuits strives to empower students to gain self-confidence and become leaders, collaborators, and critical thinkers while fostering a culture of STEM celebration in our community.

2.1.2 Mission Statement

Team 1678 pursues our vision by building a student-led, mentor-based environment that fosters innovation and teaches interpersonal and technical skills. Citrus Circuits also develops local partnerships and community outreach while striving to compete at the highest level possible.

2.1.3 Motto

The three goals that Team 1678: Citrus Circuits endeavors to achieve are embodied in our motto: Educate. Empower. Excel. Together, students and mentors educate our team and community in technical and soft skills; we empower our local youth and disenfranchised members of the community to achieve new heights; we excel competitively in the FRC community, winning events, technical awards, and FIRST cultural awards.

2.2 Team history

Team 1678 was founded in 2004 as EnGen Robotics by Steve Harvey, a math teacher at Da Vinci Charter Academy. Since then, we have changed our name and grown from a team of fifteen students to one of nearly one hundred from Davis High School, Da Vinci Charter Academy, and the Davis junior high schools.

From 2005 to 2010, we were knocked out in the Sacramento Regional quarterfinals every year, which also was the team's only event.

In 2011, we won our first regional, the Sacramento Regional, and advanced to the Curie quarterfinals at the Championship event.

In 2012, we attended two regionals for the first time, and won the Sacramento Regional for the second year in a row, once again advancing to Curie quarterfinals at the Championship event.

In 2013, we won the Central Valley Regional and, at Championship, seeded first in the Curie division. We went on to win the division, capturing an alliance to the semifinals on Einstein.

In 2014, we won the Inland Empire Regional and Sacramento Regional. At Championship, we seeded first as an undefeated team in the Newton division and we made it to the finals on Einstein.

In 2015, we won the Central Valley Regional, Sacramento Regional, and Silicon Valley Regional. At Championship, we seeded second on the Newton field and went on to win the 2015 FRC World Championship in St. Louis.

In 2016, we won the Central Valley Regional, Sacramento Regional, and Silicon Valley Regional. At Championship, we seeded third on the Hopper field, and made it to the semifinals on Einstein.

In 2017, we won the Central Valley Regional and the Sacramento Regional, and, for the first time, competed in and won the Las Vegas Regional. We attended the Houston World Championships, where we placed third in the Newton division and were picked by the first seeded team, going on to make it to the finals on Einstein.

In 2018, we won the Utah Regional and the Central Valley Regional. At the Sacramento Regional, we won the event and took home our first Chairman's award, the most prestigious award in FIRST. From

there, we attended the Houston World Championships, where we captained the second seed alliance in the Newton division and extended our Einstein streak to six years, placing third on the Einstein field.

2.3 What we do

2.3.1 Educate

One of our primary goals is to provide a unique educational platform for our students. FRC allows us to provide a unique learning environment where students work alongside professionals and experienced peers to gain industry standard skills in both technical and non-technical fields.

The offseason consists of the time between our last competition and the beginning of build season - usually early May until the beginning of January. During the late spring and summer we debrief the past year and prepare for the upcoming year, gearing up to train our new members and hone our technical skills. During the fall, we train new members, work on off-season projects, and prepare for the upcoming build season. The training is typically unique to each subteam. Our offseason project consists of building a robot with a mechanism that may be useful in a future FRC game, allowing all of our subteams to experiment and learn about something that we have never used before.

2.3.2 Empower

To empower the community, we outreach to our local community and the wider FRC community, spreading STEM and engaging the youth.

Each Saturday at **Farmers' Market**, students promote our team and fundraise at the Davis Farmers' Market. This is our largest method of outreach to the Davis community and we encourage all students to take part in supervising our booth and interacting with the community.

In the summer, we put on **Robot Demonstrations** where we demonstrate our robot and share our program with people of all ages and backgrounds. We reach out to several elementary school programs, summer camps, retirement centers, and more.

Davis Youth Robotics (DYR) is our year-round program for supporting and maintaining robotics teams for elementary school and junior high students. In 2016, we transitioned from the FIRST Lego League (FLL) platform to VEX IQ, providing local DYR teams with trained 1678 student mentors. This program has experienced massive growth in past years, currently sustaining over 30 VEX Robotics teams. Our DYR program is split into three different branches: the **DYR League**, which consists of the local teams we help mentor and tournaments we host; the **DYR Elementary Programs**, where we fund and support various local elementary schools; and the **DYR RoboCamps**.

Every fall we organize the **Fall Workshops** series, in which trained student leaders and industry professionals present on a variety of topics at our Capital City Classic offseason competition. These workshops predominantly feature 1678 students and mentors presenting on subjects ranging from team management to programming and prototyping. In addition to organizing presenters, 1678 documents and records the lectures, sharing them on Youtube for the rest of the FRC community to utilize.

In our **Diversity in STEM (DiSTEM)** program, we work to educate and empower underrepresented groups with regards to fields within STEM.

A small group of students develops and maintains the **Winter Shelter App**, a mobile application used by

the Davis Police Department to find open shelters and free beds for local homeless people.

With **Citrus Service**, we give back to the FIRST community by supporting other FRC teams and sharing our resources and experience. We have started three new teams in Woodland, Winters, and Sacramento through this program. In addition, at competition, designated Citrus Service members actively give technical support to teams in need.

2.3.3 Excel

Our team strives to excel in all facets of our program, including competitive success. We work towards building the most competitive robot in addition to qualifying for other technical and non-technical awards.

Since the 2015 season, where we won the World Championship, we have won every single FRC regional event we have been to. Alongside team 177, we are one of two teams to have made it onto the Einstein field six years in a row. The Einstein field is the highest level of competition at the Championship event, where the subdivision alliance winners all compete against each other. Even beyond that, we are the only team to have done so while being the alliance captain or first pick of our alliance.

There are many awards in FRC, some even more prestigious than winning a competition. Some awards are given for design aesthetic, robot function, or an interesting mechanism, while others are given for team spirit, exhibiting gracious professionalism, and spreading FIRST to the community. Every year, we submit for the Chairman's Award, given to a team that exemplifies and spreads FIRST's messages about Gracious Professionalism and STEM. Winning the Chairman's Award at the FIRST Championship will induct the team into the Hall of Fame, ensuring that they will be invited to every FIRST Championship from that point onwards. At the 2018 Sacramento Regional, we won our very first Chairman's Award.

Our Head Coach, Steve Harvey, and Lead Technical Mentor, Mike Corsetto have won the Woodie Flowers Finalist award. In addition, students Megan Yamoah and Maya Brandy were awarded the Dean's List Finalist Award. The Woodie Flowers award is presented to a mentor who best leads, inspires, teaches, and empowers their team, and the Dean's List award is awarded to a student whose passion for and effectiveness at attaining *FIRST* ideals is exemplary.

More information about awards in FRC can be found at <https://www.firstinspires.org/robotics/frc/awards>.

3 Team Organization

3.1 Mentors

Our mentors consist of a group of 10-15 undergraduates, engineers, retired engineers, and community members. Most mentor one or two subteams specifically, and all are incredibly valuable to our team. Mentors are here to teach, guide, and lead alongside the students.

3.2 Student Leadership

Student Leadership consists of all subteam leads and the two captains. Student leadership meets every week with three mentors (Brook, Mike, and Mr. Harvey) to coordinate upcoming events, plans for the next few weeks, and address any issues or improvements for the team.

Any student leadership position (with the exception of the captain and vice captain positions) may be split between two people to reduce the workload or for teaching purposes. No student leadership position is automatically granted a spot on the travel team.

All student leadership positions must be student team members who will be in 10th–12th grade and have been a team member in the previous year. If no such person is suitable for the position, it will be dealt with on a case-by-case basis.

Steve Harvey reserves the right to remove any student from a leadership position for any reason.

3.2.1 Captains

Together with head coach Steve Harvey and lead technical mentor Michael Corsetto, the captain and vice captain form the team's core leadership.

The captain and vice captain of the team are chosen by the previous year's core leadership.

Responsibilities:

- Ensure that 1678 is a safe and welcoming environment for all of our members.
- Keep the team together and on track. This means that core leadership has the authority to make final decisions for the team and to set and enforce deadlines for the team. The captain and vice captain are expected to lead each meeting, work with the subteam leads, know what the various parts of the team are doing, and keep people responsible for themselves.
- Communicate with the team, mentors, and parents
- Work with parent volunteers to coordinate carpools, meals, and logistics at team events and competition.
- Review and approve written materials written on behalf of the team, especially for awards.
- Engage all team members, and make sure that robotics is a safe and welcoming environment for all students.
- Manage all online forms of team organization and communication including the team Slack, team emails, and the team Google Drive.

3.2.2 Subteam Leads

Currently, there are eight subteam leads. The subteam leads for the following year are appointed by core leadership. Subteam leads are expected to have experience with their subteams and ensure that new members of the team are exposed to their subteams' purpose. Subteam leads are also responsible for ensuring that students on their subteams are trained accordingly. Subteam leads coordinate with the captain, vice captain, and other subteam leads to plan their subteams' schedule and tasks. The eight subteam leads, along with the captain and vice captain, make up the Student Leadership.

3.3 Subteams

There are five main subteams within our team: Programming, Business/Media, Hardware, Chairman's, and Strategy. Programming is split into App Programming and Robot Programming, and Hardware is split into Electrical, Fabrication, and Design.

App Programming develops iOS and Android scouting applications for competitions, allowing us to collect data on other teams and form the best possible alliance for the elimination rounds. They also

code server-side calculations to give weighted rankings for all robots in a competition based on the data collected through the tablet applications.

Business/Media is responsible for most of our fundraising efforts by contacting sponsors, applying for grants, and managing our budget. Members of this subteam also manage our team media, photographing and taking video of all team events and competitions; promoting our program through our website, the local newspaper, and various social media sites; and designing flyers and all of our team apparel.

Chairman's focuses on compiling and documenting all the outreach that our team performs. In addition, this subteam creates the Chairman's award submission each year, entailing in an essay, video, and presentation.

Hardware is broken down further into three smaller groups. The **Hardware Design** subteam uses CAD software (Solidworks, Onshape, and AutoCAD) to design the drivetrain and other mechanisms on the robot, as well as make part drawings for the Fabrication team to use. The **Hardware Fabrication** subteam uses part drawings and industrial machines such as mills and lathes to create parts for the robot. **Hardware Electrical** wires the robot and creates any pneumatic systems needed. Its job is to take the mechanical systems designed and fabricated by the mechanical team and make them controllable. All hardware teams contribute to the assembly of the robot.

Robot Programming programs the robot using object-oriented programming in C++ and data from sensors including gyros, hall effect sensors, and limit switches on the robot. Together, the subteam controls the flow of autonomous routines, during which the robot must operate entirely on its own, and the teleoperated mode, where the robot receives driver input.

Strategy develops competition strategies during the build and competition season. Members are expected to fully understand the game rules, follow FRC forum posts, contribute to discussion during strategy meetings, and deeply analyze strategies that other FRC teams are employing. During competition, along with the drive coach, the competition strategist plans out our matches and enacts the strategies developed by the strategy subteam.

3.4 Outreach Teams

In addition to our subteams, Citrus Circuits has several outreach teams, as explained in Section [2.3.3](#). Each of these outreach teams has a lead who is in charge of organizing and delegating tasks to the members of that team. Outreach leads are not considered regular members of team leadership and do not attend leadership meetings, but must still be outstanding team members willing to go above and beyond to improve the team's outreach efforts. A student who is a member of team leadership may also lead an outreach group.

3.5 Leadership Selection Process

All leadership selection happens in the same way. At the end of the school year, students will be asked to apply for leadership positions or nominate others who they believe are deserving of a position. The candidates, assembled from these nominations, will be interviewed by core leadership. Then, they will select a single lead or two co-leads for each leadership position.

4 Student Expectations

In order to remain a member of Team 1678: Citrus Circuits, all students are expected to follow the listed student expectations.

Some initial standards that must be met:

- Forms
 - Submit all required forms by the first official team meeting. This includes those listed on the registration page on our website, field trip forms, and others. The registration process can be found on www.citruscircuits.org/register.
 - Register online with STIMS, including the FIRST media consent form, which is separate from the team's.
- Grades
 - Students are expected to balance their team responsibilities with their school work. Schoolwork should be considered as a first priority, even before robotics. Students must have no grades below a 'C' for all progress reporting periods. If your grades are suffering due to robotics, Steve Harvey will have a discussion with you about whether or not you can remain a team member.

4.1 Attendance Policy

4.1.1 Attendance Standards

Attendance is taken at every official, mandatory team meeting by your respective subteam lead or secretary. These are the following criteria for attendance:

- Present
 - Being physically present is not enough - students must be attentive and productive during meeting time to be marked "present". Present markings will count positively towards your attendance percentage.
- Absent Notified & Partial Notified
 - If a student knows ahead of time that they will miss a meeting, the subteam lead should be informed at least 24 hours prior to the meeting. If they do so, their absence will be marked as "notified", and students have the ability to make up their absence. All notified absences are still counted negatively towards your attendance percentage.
- Absent Made Up & Partial Made Up
 - For notified absences ONLY, students have the ability to make up any work from the meeting, including homework and self-studying any material covered during training. If this action is taken, the absence will be counted positively towards their attendance percentage. It is on YOU as a student to proactively ask your subteam lead for work to make up.
- Absent & Partial
 - Unnotified absences cannot be made up, and count negatively towards your attendance percentage.
- Unproductive
 - If a student is not sufficiently productive or is distracting others during a meeting, the subteam lead may mark them "unproductive". Students will be given warnings when they are marked unproductive, so they know what behavior was at fault and should not

be replicated. Unproductive markings will account negatively towards your attendance percentage.

In addition to attendance of normal team meetings, a member should heed the following guidelines:

- Attend all competitions that you are invited to for the whole duration you are invited to, at least one per semester. For example, it is not acceptable to skip school to go to the Sacramento Regional on Friday and “get sick” to go hang out with your friends on Saturday.
- Everyone is expected to help in our regular outreach events, such as Farmers' Market and robot demonstrations, and to help lead and participate in other events.
- Notify team leadership about late arrivals and absences. Please contact your subteam lead by email or Slack as soon as possible, preferably at least 24 hours in advance. Use your best judgement, and let us know earlier for longer absences.
- Every student is expected to participate in an outreach group throughout the year. There will be multiple that you can choose to participate in.

4.1.2 Monthly Cuts

At the end of each month, the team roster will be re-evaluated to ensure that only those who are committed will remain as members of the team. In general, students below 75% attendance rate will be considered for re-evaluation. All students below the 75% threshold for the current month will be notified by a member of leadership, likely their subteam lead, as a warning. However, team cuts will take into consideration more than just attendance. Reasons for cuts may include, but are not limited to:

- Behavior in and outside of team meetings
- Initiative
- Work ethic
- The contribution to the team’s work environment

If it is found that a student should be removed from the team, the student and their parents will receive an email explaining the reason for the removal and will be removed from the team Slack. This will occur at the end of each month.

4.2 Codes of Conduct

In addition to obeying the rules and laws of all pertinent governing bodies, including but not limited to those of Team 1678, Davis, Yolo County, DJUSD, California, and the United States, students must follow these behavioral expectations.

4.2.1 Everywhere

When you wear the lime logo, you are representing our team, our schools, our community, our sponsors, and yourself wherever we travel, even within Davis. Treat others with respect and kindness. Your behavior impacts everyone that you represent. What you say to another team member and how you say it may be overheard by a judge, potential sponsor, or member of another team. Even the expressions on your face and body language may bring unwanted negative attention and bad impressions. Any guests you invite or bring must understand this and behave accordingly. All of your actions as a team member are directly reflected on 1678’s team image.

4.2.2 During Team Meetings

Students are expected to not use their phones at team meetings or functions unless it is necessary for the work they are doing for their subteam or otherwise directed by student leaders or mentors.

Unacceptable behavior includes but is not limited to: playing games, using social media, or other distracting and unproductive tasks.

Students are expected to respect others at all times. They should follow the Golden Rule (treat others how you want to be treated) to help sustain our professional and respectful working environment.

To create a professional working environment conducive to new ideas and change, our team has a strict no bullying or harassment policy. This includes physical, online, or verbal bullying.¹

Students are expected to take initiative during team meetings. If they have nothing to do they should be seeking out tasks from their peers and leaders or mentors on the team.

4.2.3 Online

When representing our team online, please remember Gracious Professionalism. Just like at competition or in public, you are representing our team, and must remember to be humble, professional, and considerate. To prevent any unprofessional behavior, 1678 students are not allowed to post on FRC-related subreddits, or on the FRC discord channel. Students are allowed to have a Chief Delphi account, but all posts and thread replies must be reviewed by a member of student leadership or a mentor before being shared.

4.2.4 At competition

- Respect the other teams. Remember gracious professionalism, and always be respectful.
- Stay with the group. If you need to go anywhere, let a student lead or chaperone know and find a reasonable time to do so. If you're needed and you're not there, it will reflect poorly on you.
- Stay on task and fulfill your role on the travel team.
- Follow the Dress Code outlined in [Section 4.5](#).

4.3 The Ten Up's

We expect everyone on the team to be mature and responsible young adults. These expectations can be summarized by the following points - the ten "up"s of our team:

Show Up. I will be here and on time.

Speak Up. I know the team values my ideas, so I will share them.

Listen Up. I respect others and their ideas, and will be conscious of when it is time to listen.

Smarten Up. I will aggressively learn as much as I can.

Step Up. I will take initiative to find work that needs to be done and guidance to do it well.

Grow Up. By acting like an adult I will earn my right to be treated like one.

Clean Up. I will participate in clean 15 at every meeting because I understand that the cleanliness of our workspace affects our safety, productivity, and team image.

¹ In addition to these guidelines, see the districts' general policy [here](#)

Hurry Up. I know that time is a scarce resource for a championship level team like ours, so I will have urgency in everything I do.

Live it Up. I recognize that Robotics is the hardest fun that I'll ever have, and I will make the most of my time here and enjoy it.

Never Give Up. I will never stop searching for ways to improve by failing faster.

4.4 PDA Policy

All mentors and members of 1678 are expected to maintain professional behavior, both in public and at team meetings. Professionalism can be upheld by establishing and adhering to a standard of decency, shown through a student's attitude, attire, and communication abilities. Additionally, all relationships on the team must remain professional, especially with any potential for public displays of affection (PDAs). PDAs are acts of romantic physical intimacy visible to others, not to be confused with platonic acts of friendship. Robotics meetings and events are places for students to work and be focused, and PDAs can be distracting not only to those involved but also to those who witness it. If engaging in a PDA, students create an unprofessional image and an impaired working environment for the team, whether during a team meeting, competition, or other event. Therefore, all forms of PDA are considered inappropriate and are prohibited at any team event. If you are in a relationship, do not let it interfere with robotics.

Unacceptable PDA includes but is not limited to:

- Intimate touching
- Hand holding
- Caressing/stroking/fondling
- Kissing
- Cuddling
- Sitting in another person's lap
- Rubbing or massaging
- Hugging in a romantic manner

We expect mentors to apply these guidelines to themselves with the maturity of an adult mentor. Additionally, student and mentor relationships must always remain strictly platonic and professional. See [FIRST's Youth Protection Policy](#) for more detail.

Failure of a student to adhere to this code will result in initial warnings from the Captain and Vice Captain, and possibly involvement from Mike and Mr. Harvey. If an inappropriate situation arises in which Mike, Mr. Harvey, or the captains feel it is necessary to intervene in the moment, they will do so.

4.5 Team Dress Code

- All students must adhere to the DSHS dress code, available [online](#) (page 18). This includes, but is not limited to:
 - Students must wear clothing that covers one's undergarments and private parts.
 - Students must NOT wear clothing that depicts violence, obscenities, pornography, nudity or sexual acts in any manner.
 - Students must NOT wear clothing that displays hate speech targeting groups based on their race, ethnicity, gender, sexual orientation, gender identity, religious affiliation or any

other protected group.

- In addition to:
 - Long hair must be tied back. Jewelry is not acceptable if it can entangle into robot parts or into machinery, and is generally discouraged.
 - Closed-toe shoes must be worn at ALL times.

4.5.1 Team Gear

If you are wearing a team shirt or any piece of team gear, you are representing us, even if it's just to school.

Shirts and other team gear may NOT be noticeably modified (for example a leftover large shirt being given to a petite student may be tailored, however cutting off sleeves, lowering the neckline, or any damage to any logos is not allowed).

Do NOT behave inappropriately while wearing a team shirt. Even if you're just wearing it to school, you are representing our team.

Team gear should not be sold to anyone outside of our team, regardless of the circumstances. Team gear can be traded to other FRC members, but should NEVER be sold to them.

4.5.2 At competition

At competition, it is important for the team to maintain a unified image. As such, we require all team members who are attending as part of the team to wear the current year's t-shirt and/or sweatshirt, as well as any other team-approved apparel. While in the pits or the stands, team members should not cover up the team or sponsor logos. On practice days of competition, the team may decide to relax the standards and allow previous years' shirts. The team may also decide to create a specific t-shirt for an event, in which case that t-shirt supersedes the current year's t-shirt. Details will be discussed before each competition.

4.5.3 Other events, including fundraisers and off-season competitions

Events like fundraisers and off-season competitions are slightly less formal than regionals and championship. Those events may allow previous years' shirts. For important events, we may select a certain shirt. For events that are more formal, such as presentations, we may choose to use a business casual dress code.

4.6 Training Standards

Each of the subteams has a comprehensive list of training standards that must be met before build season. Failure to meet these standards will result in removal from the team by January 1st. The training standards for each subteam can be found [here](#)².

4.7 Consequences

Initial violations of any of the above student expectations will result in a discussion with core leadership and the student being sent home. Repeat violations may result in the student being dismissed from the team.

5 Workspace Rules

² The training standards are not currently available, but will be updated by the first team meeting.

1. If you wish to borrow a piece of team equipment, ask Mr. Harvey and the leader of the subteam that uses the equipment.
2. Follow all safety guidelines and protocols. **Use of team tools is a privilege**, not a right, and safety is paramount. Do not use a machine or tool unless you have been trained and signed off to use that equipment.
3. Return all tools and equipment to their given places.
4. If a student leaves before a work session is over, they must give an appropriate amount of notice and obtain permission from core leadership and the relevant subteam lead. The student must also help clean up before leaving.
5. Do not download or install programs onto the programming, CAD, or business/media computers without the permission of the respective team lead and a reason directly related to robotics or the team.
6. At the end of each meeting the last 15 minutes will be dedicated to a “Clean 15”, at which time **every member in attendance** will help clean up the space that was used. If students are staying later than the official meeting time, the Clean 15 will still happen at the end of the official meeting time, and any students staying later will be expected to leave their workspace clean.
7. Personal equipment brought to team meetings or events must be in compliance with all school rules. In particular, **personal knives and multitools containing knives will not be allowed at team meetings or events**. Violations of this rule will result in confiscation of the tool in question; repeated violations may result in removal from the team.

6 Travelling to Competition

An “away” event is defined as an event where the team needs to coordinate travel and/or lodging arrangements. For “away” events, a travelling team will be selected. Travelling team members will be selected from the team roster according to the travel team criteria ([Section 6.1](#)). All travel team members are chosen by who will best represent our team at competition and fulfill the responsibilities of the respective competitions roles.

Travel team lists will be announced at least *two weeks prior* to the event to allow time to turn in forms and organize logistics.

Before each event, the travel team will be re-evaluated and re-selected. This reselection process will take into account your behavior at previous events, as well as your recent behavior during and outside team meetings.

IMPORTANT: Before travel team selection begins, all team members must inform core leadership of conflicts with competition events no later than the first of February. Failure to do so will result in removal from the travel team for the remainder of the competition season. Exemptions will be made for emergency situations.

6.1 Travel Team Criteria

Academic

- Maintain a “C” or better in all classes

Attendance

- Follow the team’s Attendance Policy ([Section 4.1](#))

Behavior

- Show initiative and be actively engaged in moving our team forward

- Take personal responsibility to stay focused and productive
- Act respectfully and safely during team meetings and when representing our team at events

Performance

- Take initiative in learning material required of their subteam's tasks
- Show unique aptitude at completing subteam projects and tasks
- Be best at filling the described competition roles

6.2 Travel Team Roles

The travelling team is made up of several predefined roles. Depending on the nature of roles involved, one person may fill multiple roles. The travelling team will consist of at least 20 students, with a minimum of 8 scouts, and has historically grown to accommodate up to 44 students.

The qualities below will be used when assessing members to fill competition roles. The team aims to send students who best qualify for each role to events. In addition to filling role responsibilities and qualities, travel team members must exhibit commitment, focus, solid communication, and good performance.

Captain

- Responsibilities
 - Communicate logistical information between students, mentors, parent coordinators, and parents and ensure that all students are accounted for throughout competition
- Qualities
 - Exceptional organization and communication skills

Drive Team Coach

- Responsibilities
 - Understand and communicate match strategy with Drive Team and alliance partners and support pit and drive teams as needed when working on robot or not playing matches
- Qualities
 - Exceptional knowledge of robot's abilities, mechanisms, and preferred strategy, experience on a drive team, and ability to solve problems on field before matches

Drive Team: Driver/Operator/Human Player (3)

- Responsibilities
 - Dedicated and committed to their role at competition and commit to and attend driver/operator/human player practice
- Qualities
 - Willing and enthusiastic to work closely with and follow instructions of drive coach, to put in extra effort to be competitive, and to work closely with other Drive Team members
 - Ability to solve problems on field before matches

Pit Crew: Mechanical/Electrical/Programming (3+)

- Responsibilities
 - Work as a team to diagnose and fix problems with the robot and be prepared to help teams who come to our pit
- Qualities
 - Exceptional knowledge of robot functions
 - Willingness to go above and beyond to ensure robot competitiveness

Strategist

- Responsibilities
 - Prepare match strategy for every match by communicating with other teams regarding robot abilities and then relay strategy to drive team
- Qualities
 - Exceptional communication skills
 - Ability to quickly coordinate with other teams and make decisions and compromises based on their abilities preferences

App Programmers (2)

- Responsibilities
 - Ensure scouting system is running consistently and find solutions to technical problems
 - Sub in for scouts if necessary
- Qualities
 - Exceptional knowledge of scouting system, ability to solve problems that arise

Lead Scout

- Responsibilities
 - Manage logistics for scouts and scouting system
- Qualities
 - Exceptional managerial skills, attentiveness, and familiarity with the scouting system and competition rules

Assistant Lead Scout (1+)

- Responsibilities
 - Help the Lead Scout to manage logistics for scouts and scouting system
- Qualities
 - Exceptional managerial skills, attentiveness, and familiarity with the scouting system and competition rules

Scouting Video Manager

- Responsibilities
 - Prepare, pack, and keep track of equipment and record for the duration of event
 - Coordinate with the necessary parties to share competition video footage
 - Organize and store video after the event
- Qualities
 - Familiarity with all aspects of equipment
 - Exceptional organization, planning, and communication skills

Scouts (enough to fill the travel team)

- Responsibilities
 - Collect and upload accurate and consistent scouting data during qualification matches
 - Be available to scout when needed and talk to other teams when not
 - Commit to and attend scout training as requested
- Qualities
 - Ability to stay focused, attentive, and positive during long periods of time
 - Enthusiastically follows instructions given by various team leaders
 - Asks questions for clarification

Photo/Video/Social (PVS) Media Representatives (2)

- Responsibilities
 - Take photo and video of team and robot during competition, on and off the field
 - Prepare, pack, and keep track of photo and video equipment, as well as the flag and banner
 - Update team social media before, during, and after competition

- Coordinate with fellow PVS Representative to cover needed media
- Qualities
 - Exceptional communication skills
 - Experience with photography, video, and necessary equipment

Chairman's Presenters (3)

- Responsibilities
 - Be prepared and on time for Chairman's Presentation and be team ambassadors
 - Fill additional roles as qualified
- Qualities
 - Committed to team and presentation rehearsal schedule
 - Experience presenting and/or willingness to learn and improve
 - Able to take criticism

Citrus Service (4-8)

- Responsibilities
 - Actively seek out other FRC teams to provide technical help
- Qualities
 - Exceptional communication skills, welcoming and approachable attitude
 - Solid technical knowledge in a specific technical field, with basic knowledge in the other fields

6.3 Travel Team Selection Process

On 1678, the travel team selection process honors the observations of subteam leads and protects the confidentiality of students.

Before each competition, subteam leaders create a list of students they consider fit for competition roles. They may supplement their selections with descriptions or examples of how each student best fits various competition roles using based on the above criteria. Following this, the core leadership meets to decide on a list of students who would best complete the required competition tasks and fulfill the above travel team criteria.

Drive team is selected by Michael Corsetto, the Drive Team Coach. With 10+ years of experience on drive teams, he is extremely knowledgeable about the personalities and abilities required for drive team positions. If you have an opinion about drive team roles, please express it to Mike and your opinion will be taken into consideration.

6.4 Travel Team Code of Conduct

- To travel around outside of the hotel or competition area, students are required to travel in groups of three or more students and have the explicit permission of a chaperone and one of the captains. The chaperone and captains need to know who is going, where they are going, when they plan to get back, and who among them has a cell phone.
- Without explicit chaperone permission, no one is allowed to enter a room of the opposite gender. The captain and vice captain are excluded for the purposes of room checks.
- All students are required to be in their room by curfew and not allowed to leave until dawn except in case of emergency. Unless specified at the team meetings at competition, curfew is 10 PM. If the team needs to leave very early, team members may leave their room at a reasonable time.

7 Parent Volunteering

Parents who wish to get more involved may mentor or may help in the ways listed below. (For more information on mentoring, contact Steve Harvey at sharvey@djud.net)

7.1 Donations

Just like any other team on campus, Citrus Circuits provides a great value to students, giving numerous opportunities in many areas. For much of our costs, we seek community sponsorships and grants. However, those sponsorships alone are not enough to cover all operating costs, and we plan that ~25% of income comes from parent donations. The parent donation process is introduced and discussed at the annual Parent Information Night in the fall. Every team member will be required to fill out the financial pledge form, but not required to donate.

7.2 Volunteers

We highly encourage parents to participate as parent volunteers. They are necessary for our team to run smoothly; parent volunteers help to organize trips and fundraising, and keep the lines of communication open.

7.2.1 Food

During the build and competition season, we work through lunchtime on weekends and, near the end, may pull extended hours that require a dinner break. Food is provided by the parents, usually a homemade meal of some sort. A sign-up will be available and organized through parent volunteers. Guidelines for when to bring the food will be provided; however the team may end up pushing the time of the meal later due to workflow productivity or unmet deadlines.

7.2.2 Chaperones

On away trips, we will need chaperones. Chaperones will be adults, usually parents, who are affiliated with the team. Chaperones coordinate with core leadership to organize the trip, manage the logistics of hotels and food, and oversee all of the students.

7.2.3 Transportation

On away trips, transportation is extremely important. Parents who are not event chaperones are often needed to transport our travel team to closer events in Elk Grove and Madera. Parents who drive also can come watch the events, which are very exciting! To drive, we'll need a copy of the Volunteer Personal Automobile Use form from the district on file, which is available online at <http://www.citruscircuits.org/register>. For events that are further away, parent volunteers will help organize plane flights.

7.2.3 Event Volunteering

Parents are also often needed to help out at the events we host, specifically our DYR League Tournaments in the fall, to fill many crucial roles like judging STEM projects and other awards.

7.3 Mentors

The Citrus Circuits is always open to additional mentor support, and mentoring requires no prior experience. Mentors are a key component of our team's sustainability and success. We invite any parents interested in mentoring to contact Steve Harvey (sharvey@djud.net) to find out how to get involved. We need mentors across all areas of our team, including technical areas like engineering and software development, as well as non-technical areas like leadership development, business and

finance.

8 Meetings

Meetings occur in M-1 at Davis Senior High School every Wednesday and Thursday from 6:30-9pm. These times are subject to change for articulation day or finals weeks. More meetings occur during certain periods of the year.

Meetings will start with a group meeting, led by the captain and vice captain. Together, they will give team-wide announcements and share leadership meeting discussion topics. After team-wide announcements, individual subteam leads will quickly breakdown their subteam specific meeting agenda.

To discuss something at a meeting with the whole team, send an email or a Slack message to the captain and vice captain. If appropriate, the captain and vice captain will place it on the agenda.

All expenditures paid for from the team account will be discussed by the whole team at meetings. At the meeting, if someone has an objection to an expenditure, that objection should be dealt with before the money is spent. A unanimous vote is necessary for spending money from the team's account, however if an urgent purchase is necessary, core leadership may bypass this process.

8.1 Meeting Schedule

During the whole school year we meet from 6:30-9pm in M-1 on Wednesdays and Thursdays, unless otherwise notified.

Offseason: Late April – Mid December

Offseason goes from the first meeting after the FIRST Houston Championship to the last meeting before winter break. During this time, the focus is on recruiting and training new members and raising money for the year. During the school year, the team meets regularly from 6:30 PM to 9:00 PM on Wednesdays and Thursdays. However, additional meetings may be scheduled in order to prepare for offseason competitions or train students. Potential extra meeting times include Saturday/Sunday 9am-5pm. During the summertime, from the end of school through the beginning of school, there are traditionally no regularly scheduled meetings but many subteams will be scheduling trainings and open shop hours to help prepare students for the upcoming season. In addition, fundraising and outreach efforts will take place. We frequently have robot demonstrations to local summer camps and retirement communities. We also have a booth at Farmers' Market every Wednesday from 4:30-8:30pm, in addition to our regular Saturday booths. Every student is expected to attend a certain number of the summer Farmers' Market shifts.

Build season: Early January - Mid February

Build season is where it all comes together. In early January at Kickoff, we will receive the new game and design, build, program, and wire the robot by "Stop Build Day". Because build season is regulated to be only slightly longer than 6 weeks, we need strong commitment from all members during build season. In addition to the regular Wednesday/Thursday meetings, we will also have meetings from 9:00 AM to 5:00 PM on Saturdays and Sundays. Meetings will also be held on school holidays during this period.

Competition season: Mid February – Late April

During competition season, we will be preparing the team for competition and attending competitions. Additional optional meetings may be held to continue work on our practice robot, but the schedule and expected time commitment will be very similar to that of build season.

Students are expected to attend all competitions they are invited to and to follow the behavior guidelines at those competitions. As soon as competition dates are announced, it is each student's responsibility to check for scheduling conflicts and to bring them to the attention of core leadership as soon as possible.

8.2 Calendar of Major Events

This section outlines major events in our annual calendar. Specific dates can always be found on our official team calendar: www.citruscircuits.org/calendar

Chezy Champs

Weekend in August/September

Offseason competition in San Jose put on by Team 254. The pit and drive team will stay overnight in San Jose, but carpools will be arranged for other members wishing to attend.

Capital City Classic

Weekend in October

Offseason competition held by ourselves as well as Team 2073 and Team 3859, held at Davis Senior High School. All team members not on pit or drive team will be expected to volunteer for the event.

Madtown Throwdown

Weekend in November

Offseason Competition in Madera held by Team 1323. A travelling team of comparable size to the regular competition season travelling team will be formed for this event, and will stay overnight in Madera.

Kickoff

Early January

Game reveal event, required for all members and held at Kennedy High School in Sacramento. After the reveal, all members will come back to the shop and brainstorm ideas for strategy and design.

Sacramento Regional

Dates to be announced

The Sacramento Regional is held in the Sacramento region. Because we do not have to deal with the associated travel costs, all team members may attend, given that they meet all requirements and turn in all field trip forms. Because this is our "home" regional, we often organize student volunteers to support the event. Students not on the travel team are expected to take advantage of this opportunity to contribute to the robotics community in this way while experiencing the competition environment firsthand.

The first day of competition is a practice day, and only a few team members will be excused from school to attend the competition and work on the robot. On the second day, all team members who attend will be excused from school if necessary.

The third day will be a Saturday and all team members may attend.

Two Travel Regionals

Dates to be announced

In addition to the Sacramento Regional, we attend two other regionals. We do not know which two regionals we will be able to attend until late winter/early spring, but information will be shared as we receive it.

Championships

Late April

The team will attend the Houston Championship if we qualify at one of our Regional events. To be eligible to attend under team funds, team members must again be selected as a part of the travelling team and turn in all the field trip forms. Pit and drive teams will fly to Houston one day earlier than the rest of the travelling team, which will leave the day after. All members will return together after the conclusion of the event.

10 Media Sharing Policy ³

Team 1678 uses photos, videos, and Google Drive documents in a number of ways, including, but not limited to:

- Team organization and planning
- Training new members
- Documentation
- Keeping 1678 team members and mentors informed
- FIRST Award submissions
- Sharing within the 1678 team
- Sharing with the FIRST and/or local communities
- Educating parents, family, and sponsors

10.1 Media Confidentiality

Much of this media contains information the team wishes to keep confidential. We want to keep some aspects of 1678 robot design and strategy confidential during the competition season, so we limit posting of photo/video material until the appropriate phase of the season. Confidential material is limited to sharing only with *1678 team members and mentors*. This excludes previous team members. For posting Photo/Videos in public forums, the 1678 season is broken into 3 phases.

10.1.1 Phase 1: Totally Confidential

Phase 1 is the totally confidential period – no media involving the current season's design or strategy may be posted in a public forum (including the team website), shared with a member of another team, or shared with a previous team member (even if they are not mentoring another team). This phase lasts from kickoff until the first 1678 appearance in a regional competition.

10.1.2 Phase 2: Partially Confidential

During Phase 2, some design details remain confidential. This phase begins when 1678 competes in a regional competition and ends when the 1678 official competition season is complete. The robot has

³ Section 10 has been adapted from Team 971 Spartan Robotics' Photo and Video Policy.

already appeared in public, but some topics remain confidential during Phase 2. Examples:

- Closeup photos of mechanisms.
- New designs/strategies which have not yet been used in public competition
- Video of our robot practicing or scoring outside of public competition(s)

If you are unsure what might be sensitive information, ask Mike.

In addition, extend this same courtesy to other teams. Any media which shows their robot or mechanisms in the background, must be considered confidential until after championships. This does not apply to photos and video taken at tournaments which are open to the public.

10.1.3 Phase 3: Off-season

Phase 3 is the off season, lasting from the end of the official FRC season, until the next season's kickoff. During this time, there is no limit on sharing photos/video from the previous FRC competition season. For new projects during off season, avoid public pre-exposure (examples: off-season robot, new drivetrain). People leading the project decide when to share outside the team. When in doubt, always check with Mike before posting.

10.1.4 Sharing confidential material with team members and mentors

When sharing confidential material via websites such as photo sharing sites & youtube, access must be limited to those with explicit permission by you, or by a non public URL. When sending/posting material or links, include a confidentiality reminder, such as, "Reminder – please limit redistribution to only current team members until after completion of the competitive season". The confidentiality reminder should be included in every email which contains confidential images.

11 Intellectual Property Policy

In order to ensure team knowledge is passed down effectively and to maintain the integrity of team resources, we ask that team members understand that all documentation created for team activities and shared with any team members is considered part of the growing team knowledge base. When information is shared through Google Drive, GitHub, GrabCAD, Dropbox, Email, or any other sharing service, it becomes part of the team knowledge base and will be considered team Intellectual Property (IP).

Careful consideration should be made before sharing team documents to those outside the team. If the Media Sharing Policy does not cover a question you have about sharing documents, ask a leadership team member. In addition, materials protected under this Intellectual Property Policy should never be removed from team access.

12 Media Consent Contract

For our team to advertise itself to our community, whether it be the FIRST, school, or Davis community, we ask that all team members understand that they consent to the participation in interviews, the use of quotes, and the taking of photographs, movies, or video tapes of team members by Citrus Circuits Robotics and FIRST.

Team members must also agree to grant to the team, Citrus Circuits Robotics, the right to edit, use, and reuse said products for nonprofit purposes including use in print, on the internet, and all other forms of media. Additionally, team members must agree to release Citrus Circuits Robotics and FIRST and their agents and employees from all claims, demands, and liabilities whatsoever in connection with the above.

13 Contact and Final Notes

Here is the contact information for the 2018-19 core leadership.

Steve Harvey (Head Coach):	sharvey@djud.net
Michael Corsetto (Lead Technical Mentor):	corsetto@gmail.com
Janet Liu (Captain):	admin@citruscircuits.org , j.liu484@gmail.com
Sam Sands (Vice Captain):	admin@citruscircuits.org , sjsands@gmail.com

We expect all team members to follow and understand all rules and policies in this handbook. The leadership team reserves the right to set consequences for major violations and consider confidential information in decisions. Core leadership also may change the handbook during the season. If this occurs, the team will be notified of the modifications promptly. Lastly, core leadership encourages all students to raise concerns about the team directly with them in person or through email. The students and team climate are our first priority, and we strive to do all we can to support our team mission. We hope all of our members can have a part in that process. Thank you, and let's have a wonderful season!

FRC Team 1678: Citrus Circuits Student Contract

Please print this page, sign and submit it with your registration packet

By signing below, I, the student, agree with the following:

- I have read and understood the 2018-19 Citrus Circuits Team Handbook, especially the student expectations (4) and workspace rules (5).
- I understand that to be considered a team member of FRC Team 1678: Citrus Circuits, I must follow and fulfill the criteria outlined in [Section 4](#).
- I commit to attending 75% of all team meetings and outreach activities on a monthly basis.
- I have read and understood the expectations for alerting Team Leadership of absences before competitions and the consequences for not complying (4.1).
- I understand that not everyone will be able to travel to “away” events and will agree to abide by the travelling team criteria (6.1).
- I have read and understood the Media Sharing Policy (10), the Intellectual Property Policy (11), and Media Consent Contract (12).
- I will behave in a responsible, mature, and graciously professional manner while on or representing the team.
- I understand that I can bring problems to the attention of team leadership to work it out.

Student (print name) Signature Date

By signing below, I, a parent/guardian, agree with the following:

- I have read and understood the 2018-19 Citrus Circuits Team Handbook, including the parent expectations (7). I understand what is expected of me as a parent of a team member, outlined in that section.
- I have read and understood the expectations for alerting Team Leadership of absence during a competition, and the consequences for not complying (4.1).
- I understand that for my child to be considered an considered a team member of FRC Team 1678: Citrus Circuits, they must follow and fulfill the criteria outlined in [Section 4](#).
- I understand that my child has committed to attending 75% of all team meetings and outreach activities on a monthly basis.
- I understand that not everyone will be able to travel to “away” events and will agree to abide by the travelling team criteria (6.1).
- I have read and understood the Media Sharing Policy (10), the Intellectual Property Policy (11), and Media Consent Contract (12).
- I understand that my child is expected to be respectful, mature, and responsible for themselves. If they have a question or concern about the team, I can let them interact with team leadership for themselves.

Parent (print name) Signature Date