

# PATRIOT ROBOTICS

Program Information 2020/2021

[www.beyerrobotics.org](http://www.beyerrobotics.org)

## FIRST

---

The Patriot Robotics teams compete in challenges through the FIRST Organization. FIRST is a non-profit international organization that aims to inspire young people's interest and participation in science and technology. FIRST releases challenges at the beginning of each team's season and the robots are built to complete specific tasks. Students and Parents will need to register on the FIRST website and parents will fill out a consent form at [www.firstinspires.org](http://www.firstinspires.org)

## TEAMS

---

### FTC – FIRST TECHNICAL CHALLENGE TEAMS (JV LEVEL)

#### *PLASMA PATRIOTS #4157 AND TITANIUM PATRIOTS #5211*

The FTC teams are a good introduction to robotics. The robots are built with Tetrax kits and some custom parts. Students are mostly self-led with guidance from coaches and student team leaders. Students also write business plans, keep an engineering notebook, and submit award essays. These teams are open to all Beyer High students.

**Coaches:** Charity Loche ([loche.c@monet.k12.ca.us](mailto:loche.c@monet.k12.ca.us)) and Karla Valencia Nunez ([Valencia-nunez.k@k12.ca.us](mailto:Valencia-nunez.k@k12.ca.us))

**Meetings:** Twice a week August-November, meetings are held in the Beyer STEM room and shop after school.

**Competitions:** One day competitions on Saturdays, usually within 1.5 hour drive. The teams typically compete in two competitions in November/early December.

**Costs:** ~\$10 for a team t-shirt

### FRC – FIRST ROBOTICS CHALLENGE TEAMS (VARSITY LEVEL)

#### *IRON PATRIOTS #4135*

The FRC level team is a higher commitment and has an intense build season. Students work in sub-teams to design a 100+ lb robot with CAD, fabricate custom parts, design and install wiring, and program the robot including autonomous actions and light sensors. Students run the website and social media accounts, produce video and print materials, write a business plan, and submit award essays. Students also participate in fundraisers and outreach events throughout the year. The team is led by student captains and team leads with the assistance of adult mentors who are engineers, project managers, programmers, and mechanics. This team is open to high school students in the Modesto area.

**Coach:** Heidi Pagani ([pagani.h@monet.k12.ca.us](mailto:pagani.h@monet.k12.ca.us)) and Charity Loche ([loche.c@monet.k12.ca.us](mailto:loche.c@monet.k12.ca.us))

**Meetings:** Occasional meetings at lunch and evenings through the school year. During the January -March build season students meet Saturday 9-5, some Sunday afternoons, and two evenings a week at the Beyer Robotics Shop.

**Competitions:** The entire team will attend one multi-day competition (Wednesday night -Saturday) in March or April. Additionally, a travel team selected by the coach and team leaders will attend an additional competition in March/April – the team has competed as far away as Idaho. The travel team will also attend the World Championship in Houston if the team qualifies.

**Costs:** ~\$10 for a team t-shirt and \$80-\$100 per competition for hotel, plus their own dinner costs.

## FUNDING

---

Our program is partially funded through Modesto City Schools, but we are responsible for raising much of our operating budget through sponsorships and fundraisers. Patriot Robotics is a non-profit organization, 501c(3) IRS# 47-1421220.

### Program Costs - Estimates

- FTC registration and parts kit \$2,500+ (plus more if an additional team added)
- FRC first event registrations \$9,000
- Summer Camp & Outreach
- FRC robot parts/supplies \$8,000
- Competition travel and lodging \$8,000
- Plus \$ for outreach, tools & materials

### Income Sources

- Modesto City Schools STEM Grants for event registrations and occasional shop upgrades.
- Spaghetti Dinner, Chipotle, Amazon Smile, Gift Wrap & Other fundraisers
- Grants from NASA, Brin-Wojcicki Foundation, SPIE, Boyett
- Money and/or material donations from corporate and private sponsors, e.g. O'Briens Market, Hogan Manufacturing, Port of Stockton, DOT Foods, **Sponsorship forms and letters are available on our website.**

## BOOSTER CLUB (Parent & Supporter Club)

---

Our program requires the support of many parents and adult supporters! Parents and supporters meet once a month to organize fundraisers, events, travel, and other logistics as well as discuss any new information regarding the teams. We meet the third Wednesday of each month at 6:30pm in the STEM Room. Please join us! August 19<sup>th</sup>, Sept. 16<sup>th</sup>, Oct. 21<sup>st</sup> and continuing each third Wednesday. When in-person meetings aren't advised, we meet via Zoom phone or video call at the same day and time. Contact the boosters at [beyerhighschoolrobotics@gmail.com](mailto:beyerhighschoolrobotics@gmail.com) to join our mailing list for updates.

### Officers

President: Heather Haubrich [hhaubrich@gmail.com](mailto:hhaubrich@gmail.com)

Vice President: Sherry Calkins    Treasurer: Tricia Rosenow    Secretary: Tom Stank

## ADDITIONAL INFO

---

### FIRST LEGO LEAGUE TOURNAMENT

Patriot Robotics hosts a FLL tournament at Beyer which is a competition for elementary school age robotics teams in mid-November each year. We need student and parent volunteers for this event. Please contact Heather at [hhaubrich@stancoe.org](mailto:hhaubrich@stancoe.org) to help with organizing.

### MENTORS

Adult mentors are an important key to our success. Mentors are parents, grandparents, alumni, and other adults who have experience in project management, engineering, programming, mechanics, etc. We are always looking for mentors, especially during the FRC build season.

### FOOD AND TRANSPORTATION

Sign-ups for parents to give rides to competitions usually go out a few weeks before a competition. Drivers need to fill out the MCS Driver Registration form each school year and return it to the Beyer office well before competition.

Parents are also asked to help provide hot lunches for students and mentors on Saturdays during the FRC build season (Jan-Feb). A sign-up sheet will be sent out in December. Snack and drink donations can also be brought to the shop anytime during the build season.

## Team Sign Up and Information

Students and parents – Sign up for Remind to get updates and notifications from team coaches.

FTC: Text @ftcbeyer to 81010

FRC: Text @frc4135 to 81010

[www.beyerrobotics.org/register](http://www.beyerrobotics.org/register) - Join the team roster and find links for registering on FIRST and download permission slips and forms

## Important Dates

**Booster's Meetings:** Third Wednesday of every month, 6:30-8:00

**FTC Shop Time:** After school two days a week Aug-Dec. 2020 Season TBD

**FRC Off-Season Meetings:** TBD. Last year was afterschool on Wednesday minimum days August-December. Possibly virtual this fall.

**FTC Competitions:** Two Saturdays in Nov or Dec, TBD late October

**Beyer HS FLL Competition:** TBD – mid November

**FRC Kick-off:** Jan 2<sup>nd</sup>. Official start to FRC season.

**FRC Shop time:** TBD – a lot (e.g. 5:00-8:30PM two weekdays, 9-5 Sat, and occ. Sun afternoons, January – mid-February, then occasional meetings as needed until competitions)

**Open House Spaghetti Dinner Fundraiser:** Thursday Jan 28, 2021 if in-person events allowed.

**FRC Competitions:** Usually two in March/April. Full team will attend one, leave Wednesday night and return Sunday night. A travel team of experienced students chosen by the coaches/leadership will attend a second competition, leaving Wednesday and returning Sunday. One competition usually lines up with spring break. The full team competition is usually in Davis or Fresno, and travel team may go as far as Arizona or Idaho or another in-state option. Unknown what 2021 events will look like.

**End of Year Awards:** TBD – May 2021

**End of Year FRC BBQ Swim Party:** TBD – May 2020