

## WELCOME BACK TO THE TEAM 1912 COMBUSTION NEWSLETTER!

### Alive again!

After over a year away, we're excited to bring our newsletter back to life! Once again, this will be your go-to place for updates on our progress with robotics, community outreach, and future plans. Whether you're a sponsor, a student, a parent or a community member, we want to thank you for joining us or sticking with us. Your support fuels everything that we do.



### What's in this issue?

In this first edition of our relaunched newsletter, you'll find a recap of all the work we've done this summer. [Sponsor Thank You's at the End!](#)

- **May** – Innovation & Outreach: TPU treads, shop upgrades, and Women in STEM Day.
- **June** – Training & Technical Growth: CAD, CNC, and sponsor recognition.
- **July** – Shop & Programming Expansion: New shop tools, programming training, and ATC integration.
- **August** – Outreach & Awards Prep: Community partnerships, STEM kits, and Impact Award research.



TORPEDO AT NORTHSORE KNOCKOUT

# MAY

## INNOVATIONS AND OUTREACH



TPU Treads on Torpedo



### What are TPU Treads?

TPU is a flexible material we can 3D print. We used it to make custom treads (like robot tires) for our swerve wheels. Compared to off the shelf Colson wheels (durable but with less grip), TPU treads give us much better traction and control on the field. They do wear faster, but since we print them ourselves, replacements are quick and easy.

### Elevator Upgrades

In May, we also rebuilt our elevator system. By changing the gear ratio from 20:1 to 5:1, we made it much faster. This allows our robot to move game pieces more quickly and efficiently during matches.

## WOMEN IN STEM!



On May 10th, the women of Team Combustion hosted our annual **Women in STEM Day** at Northshore High School.

This full-day event welcomed girls in grades 3–7 from across **eastern St. Tammany** to explore science, technology, engineering, and math through hands-on activities.

Highlights included creating balloon cars, robot demonstrations, hands-on chemistry experiments, and lessons in meteorology and veterinary science. Students rotated through each station with guidance from our team members and STEM volunteers.



FLL Members Junie and Danielle presenting their robot



Student volunteers and STEM presenters

Nearly 50 students joined us for this year's Women in STEM Day, making it one of our most successful outreach events yet.

The day featured mentorship led by the women of Team 1912, alongside guest STEM professionals from New Orleans, including engineers, meteorologists, and educators. Their expertise gave students a wide range of perspectives and career paths, inspiring them to see themselves as future innovators and leaders.



# JUNE

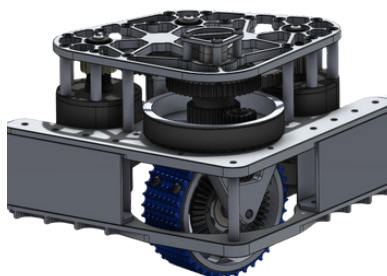
## TRAINING & TECHNICAL GROWTH

*As summer heated up, Team 1912 built momentum with training, technical upgrades, and creative outreach. From drivetrain workshops to CAD design, CNC fabrication, and laser cutting projects, June showcased our team's growth both on and off the robot.*

### Swerve Drive Training

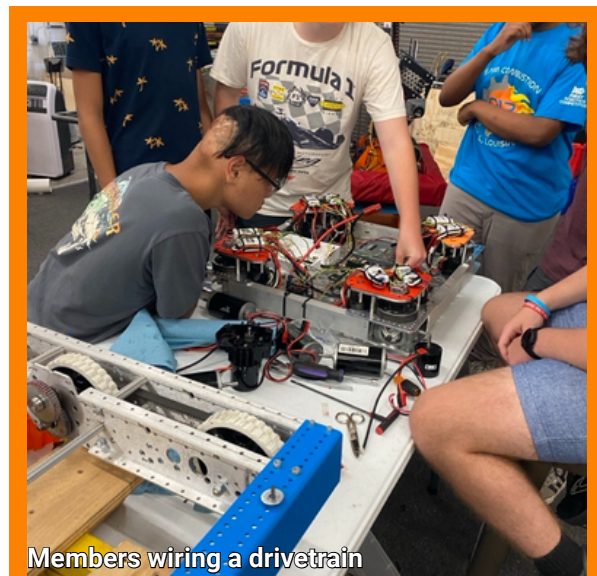
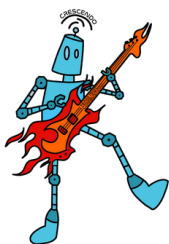
- Multiple hands on assembly and wiring workshops for new and returning members.
- Students learned basic functions of the drivetrain while building more confidence with our tools.

\*Mk4i swerve drive module

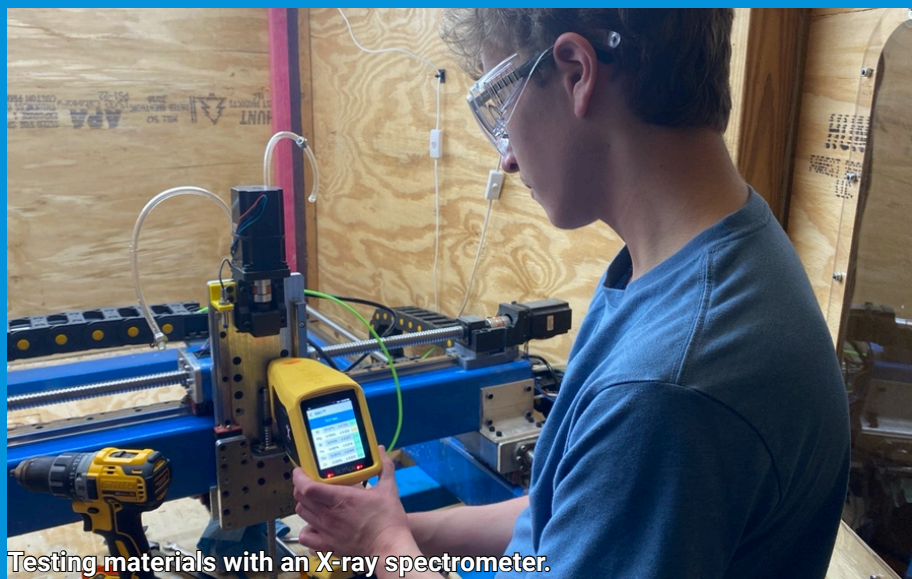


### Controls Presentation

Our controls team gave a beginner-friendly presentation on control theory and how it applies to our competition robots, giving newer students a better understanding of how controls and wiring function within an FRC robot.



Members wiring a drivetrain



Testing materials with an X-ray spectrometer.

### CAD Training

Students participated in CAD workshops using Onshape and other design platforms, learning how to model and prototype parts digitally.

### CNC Fabrication

- continued fabrication of double wasteboard.
- CNC calibration included router tramming for more precise cuts.
- Students began fabricating an enclosure for the CNC machine.

### Laser Cutting Projects

Students learned to operate the laser cutter safely and effectively. Using this tool, they created custom plaques and thank-you gifts for sponsors, along with small prototype parts for the robot.

The project helped new members gain experience with design-to-fabrication workflows while giving the team another way to showcase creativity and appreciation.



Our laser-cutter



# JULY

## SHOP & PROGRAM EXPANSION

*July was a month of growth, upgrades, and off-season action for Team 1912. From shop improvements and programming training to preparing our robot Torpedo for Northshore Knockout, our team made big strides on and off the field. Here's a look at what we accomplished this month!*



### Programming Training

We launched our first programming training sessions, designed to bring new members up to speed while giving returning programmers a chance to strengthen their skills. These sessions set the foundation for more advanced training later in the season.

### Assembly Upgrades

In the shop, we built a brand-new assembly table to improve workspace organization. The table was painted, fitted with plywood side panels for tool storage, and even had a new ventilation cutout added. Students also began 3D printing custom tool holders to make the space more efficient.

### Fabrication Work

Our fabrication team focused heavily on the CNC this month. We trammed the router using a glass plate and dial indicator, cut out parts for "Ziptie 2" (two polycarbonate arms and four metal brackets), and held training sessions for new operators. Progress also continued on integrating the Automatic Tool Changer (ATC): fabricating a wooden spacer, mounting the system, wiring it, and starting macro setup.

### Northshore Knockout

On July 18–19, Team 1912 competed at the Northshore Knockout off-season event as the 1st pick of Alliance 4, teaming up with Team 364 (Team Fusion) and Team 8324 (MECO Robotics). Torpedo's reprogrammed elevator gave smoother cycles as we advanced through several rounds, gaining valuable match experience before being eliminated in double elimination.



Torpedo before a match



Driveteam getting ready to transport the robot



# AUGUST

## OUTREACH, AWARDS, & COMMUNITY GROWTH

August was all about outreach, preparation, and laying the foundation for the new season. From award research and STEM events to new partnerships, community engagement, and team organization, Team 1912 kept busy building connections and sharpening our focus for the year ahead.

### STEM Engagement

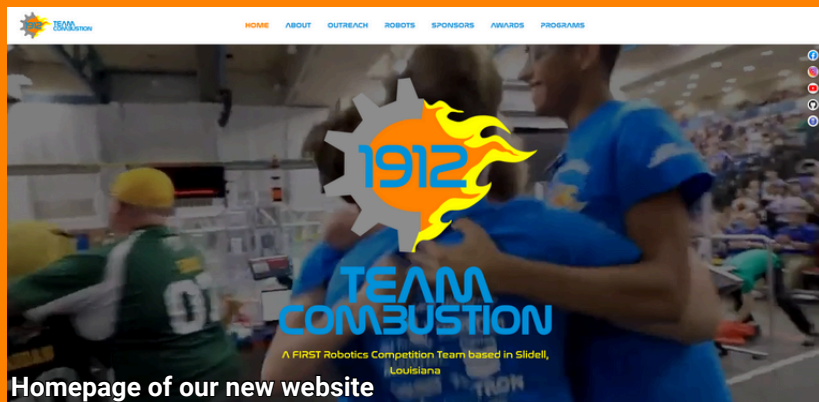
Students created and delivered over 100 STEM kits for Open-Arms Church Camp, where they also ran interactive STEM activities with kids. The team attended the St. Tammany Marketplace to promote FIRST and local STEM events, while also planning future library and after-school STEM programs. Work also began on launching a STEM Book Drive.

### Monthly STEM Days

We hosted our first FIRST Saturday of the season and scheduled additional monthly Women in STEM Days and STEM Saturdays for the fall.



Demo at Open Arms Summer Camp



Homepage of our new website

### Team Organization & Infrastructure

August also brought improvements to our team's internal operations. Members reorganized classroom and 801 build spaces, rebuilt the team website, and launched our TikTok page for outreach. Work also began on an offseason plant innovation project.



### Award Research & Strategy

We began preparing for this year's awards season by studying Impact Award-winning teams and their strategies. Using those insights, we started shaping our own presentation and taught new members about FIRST awards and values.

### Partnerships & Networking

August also brought new connections: we partnered with Mike's Hardware, represented the team at Future Focus, school club days, and open houses, and expanded our network in Slidell.



August's FIRST Saturday Event



# THANK YOU!

## THAT'S ALL FOLKS!

That concludes the first edition of our reinstated newsletter. We thank you so much for reading through until the end, as your support means the world to us.

Because this newsletter is so new, things will be changing a lot, and nothing is completely set in stone yet. However, you can expect **edition #2** to be released within September, detailing our **2025 competition season**. We'll also be sending out a press release, detailing how **Red Stick Rumble** went, which took place on the 13th of September!

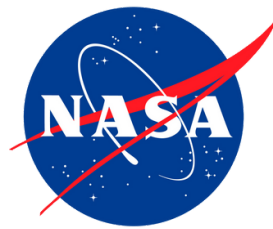
## UPCOMING EVENTS:

October 10th, Fall STEM Day @ Northshore High

October 11th, FIRST Saturday @ Northshore High

## SPONSOR THANK YOU!

# INFERNO



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Mikes Hardware & Building Supply



# BONFIRE



# TORCH



# TORCH

Southside Cafe • Eddie's Wrecker Service • NOLA Southern Grill •  
Koi's Asian Cuisine • AZ Snacks and Beverages • Resource Bank -  
Slidell



@teamcombustion



www.team1912.org



team1912combustion@gmail.com

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