

# 2015-2016 Res-Q Team Handbook



Team 7491  
The Robot Corps

## **Purpose**

This handbook is an information source and communication tool for The Robot Corps Team, their supporters, families, and for other FIRST Teams.

## **What is FIRST?**

**A unique varsity Sport for the Mind™ designed to help high-school-aged young people discover how interesting and rewarding the lives of engineers and scientists can be.**

### **Mission**

The mission of FIRST is to inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that build science, engineering and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.

### **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**

Coopertition® 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.

## Student Benefits from the Program

- Learn Business skills such as: time management, leadership, and public speaking
- Expands knowledge outside of school, especially in the science and technology areas
- Promotes hands on learning, critical thinking, and problem solving skills
- Work side by side with professional mentors to develop new skills and build upon existing ones
- Builds self confidence
- College scholarships
- Develop interpersonal skills

## Internet Resources

The Robot Corps website: [www.ftc.runneals.com](http://www.ftc.runneals.com)

FIRST Tech Challenge Robotics: <http://www.usfirst.org/roboticsprograms/ftc>

FTC Game: <http://www.usfirst.org/roboticsprograms/ftc/game>

The FIRST website (usfirst.org) has information for all FIRST programs, including marketing resources, communication, scholarships, teams and events in your area, newsletters, updates and a Q&A form for the game manual, a season calendar, as well as other valuable resources.

## Overall Team Goals

- Provide students with hands on STEM (Science, technology, engineering, and math) experiences that would not exist otherwise.
- Act as a real world application to supplement material learned in the classroom.
- Create a sustainable team
- Establish and maintain a positive and recognizable team image.
- Strive to compete at the highest level in FIRST
  - Create a robot that is competitive in the FIRST Tech Challenge
- Promote 4-H, STEM, FIRST programs, and The Robot Corps at community events through volunteering and outreach.

## Team Communication

In order to keep updated with the team, please use the follows media:

**Website:** Our website (www.ftc.runneals.com) is used as a public location for information about the team. This includes general updates on the team as well as general and contact information for sponsors, fans, and other FIRST participants.

**Email:** Weekly emails are sent. Emails can be sent by any teammate. Coach Jane () will send out the weekly emails during the school year for “official” team updates. If you have information

for, or questions about the weekly email, please contact Jane. To send notes to the team, use the group email. To be added to the list, contact Mentor David ().

**Calendar:** To access the team calendar with all team events (and meeting times), When prompted for password, enter

**Google Documents:** The Robot Corps Google Documents for team documents. Access to these will be monitored and permission given to only the team members that need it.

**Twitter:** Our team's twitter handle is @ftc7491. This is a public space to share team updates with our following communities. We also use our twitter to broadcast our match results at competition.

**Team Meetings:** The team has a meeting schedule that fluctuates with each "season" (build season, off season...). Meetings will be announced via team emails and the team calendar. Members and parents can also find meeting times in the google calendar. Meetings are used for team conversation, important information, and other purposes that cannot be satisfied by email communication.

**Sponsor Communication:** Students and Mentors are responsible for updating team sponsors throughout the season to encourage a healthy relationship between the team and the sponsors. This can include monthly newsletters, thank you letters, meetings, etc.

Students are responsible for maintaining the team website, facebook, and twitter. All team members are expected to check their email frequently and use the team calendar. Team Captains and Mentors are responsible for updating the Calendar/Google Documents, running team meetings, and sending out emails.

## **Team Organization**

The team structure is the general team organization of both students and mentors. Students are divided into subgroups to make management easier and to keep the team efficient and cohesive.

### **GRADES ARE A PRIORITY:**

Students are encouraged and reminded that their studies are top priority. If this means that a work session needs to be missed due to school needs and studies, then that is supported by the team.

## **Officer Positions**

(Students need to apply for and be elected by their peers for the officer positions, unless otherwise specified in the notes)

<b>Position</b>	<b>Duties and Qualifications</b>	<b>Notes</b>
Team Captain (President) Oversees/Manager of Technical Side	<ul style="list-style-type: none"> <li>• Team Spokesperson</li> <li>• Liaison to FIRST</li> <li>• Personnel management</li> <li>• Final approval on all awards submissions</li> <li>• Tiebreaker and executive decision powers</li> <li>• Runs meetings</li> <li>• Ensure Engineering Notebook is maintained/completed</li> </ul>	<p>The Team Captain is the voice and personality of the team and must act accordingly. The Team Captain should be in charge of the team for all competition and building events.</p> <p>You must apply for this position, it is appointed by the team mentors.</p>
Co-Captain (Vice-President & Treasurer) Oversees/Manager of Business Side	<ul style="list-style-type: none"> <li>• Runs meetings in Captain's absence</li> <li>• Coordinates non-engineering activities</li> <li>• Scheduling and event organization</li> <li>• In charge of budgeting, sponsor follow-up and parts ordering and tracking</li> <li>• Must keep the team within budget</li> <li>• Oversees the business sub-teams</li> </ul>	<p>Treasurer is often a position assumed by the co-captain, though it may be split off if it becomes necessary.</p> <p>The Co-Captain is appointed by the team mentors.</p>
Secretary/ Reporter	<ul style="list-style-type: none"> <li>• In charge of taking meeting minutes.</li> <li>• Write press releases for local media outlets and our website.</li> </ul>	
Historians	<ul style="list-style-type: none"> <li>• Collect and compile records in a record book.</li> <li>• Develop a powerpoint at the end of the year to use as a promotional</li> </ul>	More than one historian is encouraged.

## **Sub-Team Breakdown:**

Below is a list of the current sub-teams and their duties. All team leaders are responsible for ensuring the safety of themselves, their sub-team and everyone else are following proper safety practices.

<b>Sub-Team</b>	<b>Duties</b>	<b>Notes</b>
Chassis / Drive	<ul style="list-style-type: none"> <li>• Designs and constructs the frame and drive train</li> <li>• In charge of testing the individual components which belong to their subsystem</li> <li>• Makes CAD renderings of the robot</li> <li>• In charge of making sure all parts can be made either by shop tools or by the machine shop</li> </ul>	The Chassis sub-team finalizes and builds the robot drive base and basic frame. Member of this group are often also part of the manipulator group.
Manipulator	<ul style="list-style-type: none"> <li>• Designs and constructs the scoring mechanisms</li> <li>• In charge of testing the individual components which belong to their subsystem</li> <li>• Makes CAD renderings of the robot</li> <li>• In charge of making sure all parts can be made either by shop tools or by the machine shop</li> </ul>	The Manipulator sub-team finalizes and builds the scoring mechanisms. They should be heavily involved in strategy planning, as the final strategy ultimately dictates their tasks.
Programming / Electrical	<ul style="list-style-type: none"> <li>• In charge of building and programming the controls interface</li> <li>• In charge of writing and testing all robot code</li> <li>• In charge of wiring all electronics</li> </ul>	
Strategy and scouting	<ul style="list-style-type: none"> <li>• Provides competitive information for the competition team prior to and during competition, and develops scouting database and data collection system.</li> </ul>	
Fundraising	<ul style="list-style-type: none"> <li>• Plans and organizes fundraiser(s) for the team</li> </ul>	
Website	<ul style="list-style-type: none"> <li>• Maintains and updates the team's website</li> <li>• Maintains the team's social media presence (Facebook &amp; Twitter)</li> </ul>	

## **Liability, Security, Risk**

- 2-deep mentoring will be implemented
- Implementation of a safety culture
- Insurance for students will be attained
- Permission slips will be utilized
- A team contract will be created and signed by all mentors, students, parents

## **Student Involvement**

There are many ways for students to be involved with the team. In the fall, they participate in the team events and meetings. Starting in January, students are required to become more active members of the team and really get involved in the FIRST program. On the list below are some of the opportunities available for students:

- Team leadership positions
- Mechanical Design
- Software Development
- Marketing, Public Relations & Media Publications
- Fundraising
- CAD
- Strategy Development & Robot Operation
- Videography & photography
- Limitless!

## **Team Rules**

- 1) Keep on Task
- 2) Be on Time
- 3) If you don't have a task, find one or leave!
  - a) Don't be afraid to ask!
  - b) Deadlines
- 4) Experience/Inexperienced partnership of members when possible
- 5) Member Centric Discussions
  - a) Jane/David/Roger will facilitate and ensure everyone gets appropriate input
- 6) Age-Appropriate Behavior
- 7) Nothing\* is bad idea (\* Appropriate)

## **Consequences**

While we do not foresee any problems, students who break these rules will receive the following consequences:

- Verbal warning from a mentor
- 2nd verbal warning, must call home
- Student is no longer invited to travel with team to competitions

## **Adult Mentor Involvement**

Adult mentors are encouraged to help out in any way they can assist the team. The efforts of these sponsors must be student-focused and within the spirit of FIRST. Adult mentors will need to be approved by the team leadership and managing partners.

### **Parent Commitment:**

- Attend/observe scheduled meetings if desired.
- Provide their child with necessary transportation to and from Story County Extension Office and/or Competition Locations.
- Provide the team with snacks during the “build season” for ~10 members.
- Provide support for the team. This may include chaperoning at the build site, contributing treats, making travel arrangements, contributing tools, making phone calls, etc.

## **Conflict Resolution**

Being on team and working under a tight deadline can provide opportunities for conflict to occur. Please follow the following process in dealing with conflict:

1. Talk to the person privately to resolve your differences.
2. If #1 is not satisfactory, discuss the situation with the adult mentor of your sub-team.
3. If necessary, bring the concern to the team coach/coordinator.
4. Adult concerns need to be resolved without involving students. Concerns need to be discussed with the coach/coordinator

Thanks to the teams who posted their handbooks on Chief Delphi-- Team Neutrino #3928, Team Winovation #1625, BombSquad #16, CyberTooth – Rookie, and RUSH #27.