

# **CCNY FIRST ROBOTICS**

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## What is FIRST?

FIRST (For Inspiration and Recognition of Science and Technology) was founded in 1989 with the goal of motivating young students to pursue education and career opportunities in the STEM fields. 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 selfconfidence, communication, and leadership.

## What is FRC?



The FIRST Robotics Competition, or FRC, is a highly competitive program offered to high school as well as college students. Every January, a new competition is revealed and teams have six weeks to build and program a working robot to fulfill the given tasks. Teams, under limited time and resources, must work on raising funds, developing a team brand and maintaining good teamwork skills all while engineering the next winning bot.

#### What is our role?



City College of NewYork

This is the 3D printer we made last semester. We are going to use this to make parts for the Firefighting Robot Competition. It is available to club members free of charge as long as you have the CAD modelled part.

#### Judges at SeaPerch underwater Competition





FIRST Robotics at 2013 Space Fest

Mentorship serves a huge role in the FIRST Robotics Competition, as it guides the motivated students through techniques of engineering, leadership and teamwork to fulfill everything necessary to have a successful team. As college students, we have some experience with "realworld" engineering through the courses we have taken, previous FIRST experience or other external research opportunities we have pursued. Using what we know, we hope to mentor a high school team through FRC seasons, providing them with guidance with the many obstacles they must overcome. In addition to this, we would also like to assist other local high school by holding workshops, making school visits or producing online tutorials.

## What is our mission?

Our primary goal of this club will be to provide mentorship to one high school FRC team while providing resources to other local high schools. During the off-season of the competition, we hope to make ties with the high schools and work on developing resources for the teams to use. During the season, we will assist teams with designing, building and programming the robot as well as other issues they may encounter. While being mentors to the high school students is key in being a good engineer, it is also important that we improve upon what we know as well. The key to understanding "real world" engineering experience is to experience it in our own eyes. As a result, we hope to use this as a platform for networking among us engineers to expose ourselves to all the opportunities available to us such as internship, internal research experiences and engineering competitions.

## What are our plans for this year?





**Trinity** Firefighting Competition



PHENIX Detector at BNL

Our primary goal for this year will be to compete in the Trinity College Fire Fighting Robot Competition. This competition is held by the Trinity College for colleges. Teams from different Colleges all over the United States come to participate in the competition. There is a model home created through which a robot has to navigate and look for fire which is represented by a candle and extinguish it by different means such as fan, water etc. Cash Prices are awarded to teams in 1st, 2nd and third place. There is also an award for the winning team called BURP Award. We are holding Arduino workshops to give our club members the basics so they can work on the fire fighting robot.

In addition to that, we are also planning to make a trip to Brookhaven National Laboratory (BNL), which is noted for the design, construction and operation of large-scale, cutting-edge research facilities that support thousands of scientists worldwide. We will go and see what they do and meet with the faculty and researchers to get a better understanding of what they do while discovering our passion.

### How can I find more information about this club?

We will hold a general meeting for all students who are interested on 10-2-2014. You can also check out our website, ccnyfirstrobotics.wordpress.com or send us questions through our email, ccnyfirstrobotics.1@gmail.com. Our advisor, Dr. Yuying Gosser, can also provide information as well. You can visit her at 2M1 Steinman Hall.