ELM CITY ROBO SQUAD

FIRST ROBOTICS COMPETITION (FRC) TEAM 558

www.elmcityrobosquad.org
<table>
<thead>
<tr>
<th><strong>Name</strong></th>
<th>Elm City Robo Squad</th>
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<tbody>
<tr>
<td><strong>FIRST Robotics Competition</strong></td>
<td></td>
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<tr>
<td><strong>Team Number</strong></td>
<td>558</td>
</tr>
<tr>
<td><strong>Nickname</strong></td>
<td>five-five-eight</td>
</tr>
<tr>
<td><strong>Motto</strong></td>
<td>Family, School, Robots</td>
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<tr>
<td><strong>Rookie Year</strong></td>
<td>School Year 2000-2001</td>
</tr>
<tr>
<td><strong>Location</strong></td>
<td>Hill Regional Career High School, New Haven, Connecticut</td>
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<tr>
<td><strong>Founders</strong></td>
<td>John Buffa and Jim Crowe from United Illuminating Co.</td>
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<td><strong>School Affiliation</strong></td>
<td>Hill Regional Career High School</td>
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<tr>
<td><strong>Team Demographics</strong></td>
<td>School Year 2016-2017: 51 students: 29 girls, 22 boys</td>
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<tr>
<td><strong>Volunteer Mentors</strong></td>
<td>1 Teacher Mentor from Hill Regional Career High School</td>
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<tr>
<td><strong>Major Sponsors</strong></td>
<td>22 Mentors including 17 Engineers, 3 Parents and 3 College Students</td>
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<tr>
<td><strong>Major Sponsors</strong></td>
<td>United Technologies, United Illuminating, Yale University, Comcast NBCUniversal, Hill Regional Career High School/NHPS, Parker Hannifin, Svigals + Partners, Walmart Foundation, Best Buy Foundation, National Instruments, Frederick A. DeLuca Foundation, Community Foundation for Greater New Haven</td>
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<tr>
<td><strong>Summary of Growth</strong></td>
<td>2000: 7 Students, 2 Mentors, 3 Major sponsors</td>
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<tr>
<td><strong>School Financial Status</strong></td>
<td>2017: 51 Students, 22 Mentors, 12 Major sponsors</td>
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<tr>
<td><strong>Meetings</strong></td>
<td>Weekly September through December</td>
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<tr>
<td><strong>Website</strong></td>
<td><a href="http://www.elmcityrobosquad.org">www.elmcityrobosquad.org</a></td>
</tr>
<tr>
<td><strong>email</strong></td>
<td><a href="mailto:elmcityrobosquad@gmail.com">elmcityrobosquad@gmail.com</a></td>
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<tr>
<td><strong>Phone</strong></td>
<td>203-693-1558</td>
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www.elmcityrobosquad.orgd
Our Mission
Our mission is to inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that build science, technology, engineering and math (STEM) skills in a diverse urban setting with a diverse student body where we create a culture of acceptance, pride, respect and excellence.

Our Program
The Elm City Robo Squad robotics program is a free after-school activity designed to inspire young people to pursue careers in science, technology, engineering and mathematics (STEM). Our students design and build complex robots, learn business skills, win scholarships and simply have a great time. The program is based at Hill Regional Career High School, a Title I school, and is open to inner-city high school students, young women and men in grades nine through twelve, in New Haven, Connecticut. Our primary robotics education is focused around the FIRST® (For Inspiration and Recognition of Science and Technology) Robotic Competition (FRC) program and we are FRC® veteran team number 558 established in 2000. We were founded by two United Illuminating engineers, John Buffa and Jim Crowe.

The program places a strong emphasis on community outreach activities. These activities bring communities together as students, parents, teachers and mentors work in partnership to achieve a common goal: building a brighter future for our students. Although the design, construction and programming of a robot is the central activity, our overall goal is to build people, not robots.

We are an active organization that seeks to inspire students at every grade level, throughout the community. Our major outreach event is Elm City Robo Fest, a robotics tournament for grade-school children participating in the grammar school program, FIRST® Lego League. We host the tournament at our high school and we introduce the children to our robotics program by demonstrating our robot and encouraging them to continue with robotics.

Elm City Robo Squad’s program is award winning. We have received many FIRST® awards including: Chairman’s, Engineering Inspiration, Quality, Industrial Safety, Gracious Professionalism and Team Spirit Awards. We have also been the Connecticut State (CAS/CIAC) Robotics Champions for 2013, 2014 and 2016. In the 2015 season, we won the FIRST® New England Region Chairman’s Award which honored us for best representing a model for other teams to emulate and best embodying the purpose and goals of FIRST® robotics.

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**FIRST® Vision:** Dean Kamen¹, one of the founders of FIRST, is an inventor, entrepreneur, and tireless advocate for science and technology. His passion and determination to help young people discover the excitement and rewards of science and technology are the cornerstones of FIRST. Dean wanted “[t]o transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology leaders.”

**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®** 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 FRC® Program:** FIRST Programs include FIRST Robotics Competition (FRC) for Grades 9-12 ages 14-18. Elm City Robo Squad is an FRC team. In 2016 FIRST Robotics Competition included 3,140 teams. 73,000+ high-school students (Grades 9-12), 56 Regional Events, 48 District Qualifying Competitions, 5 District Championships, and FIRST Robotics Competition Championship at the FIRST Championship in St. Louis, MO, April 2017.

FIRST is a volunteer-driven organization built on partnerships with individuals as well as businesses, educational institutions, and government. Some of the world’s most respected companies provide funding, mentorship time and talent, and equipment to make FIRST’s mission a reality. There are over 39,000 committed and effective volunteers who are key to introducing 68,000+ high-school students to the joy of problem solving through engineering.

Since 1992, FRC (FIRST Robotics Competition) has challenged high school students, working with professional mentors to solve an engineering design problem in an intense and competitive way. The program is a life-changing, career-molding experience and it’s a lot of fun.

For more information about FIRST and its competitions visit www.usfirst.org

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¹ Dean Kamen, the inventor of, among other things, the Segway scooter.
Elm City Robo Squad began in 2000 as part of a physics class at Hill Regional Career High School, an inner city, Title I, New Haven high school. A few years later, we became an after-school program using a basement workroom. In 2006, the team moved to a robotics room on the school’s main floor. Since 2001 we have participated in FIRST (For Inspiration and Recognition of Science and Technology) robotics competitions where the team of about twenty-five students annually designs and builds a robot as part of a challenge. We began with only two engineers mentoring and now have twenty-two mentors. In seventeen years, we have influenced the lives of more than 400 ethnically diverse high school students. In New Haven, where 24% of students don’t graduate, our students graduate and attend college and even receive scholarships.

**Awards & Standings**

2017 Awards STEAMWORKSTM

**FIRST World Championship Finalist Archimedes Division, 11th Seed**
**FIRST World Championship – Gracious Professionalism Award**
**FIRST New England District Championship - Regional Chairman’s Award**
**FIRST New England District Championship - Dean’s List Finalist – Selma A.**
**FIRST Waterbury District Winner, Semi-finalist**
**FIRST Waterbury District Entrepreneurship Award**
**Waterbury NE District - Dean’s List Semi-finalist – Selma A.**
**FIRST Hartford District Winner**
**FIRST Hartford District Chairman’s Award**
**NE District Championship - Semi-finalist**
**CAS/CIAC Connecticut State Championship – Winner, 14th Seed**

2016 STRONGHOLD™

**FIRST World Championship Finalist Galileo Division, 8th Seed**
**FIRST New England District Championship – Team Spirit Award**
**FIRST Waterbury District Winner, 1st Seed**
**FIRST Waterbury District Quality Award**
**FIRST Hartford District Winner**
**FIRST Hartford District Chairman’s Award**
**CAS/CIAC Connecticut State Championship – Winner, 6th Seed**
Where Is Wolcott Invitational, Best Design Award
Where Is Wolcott Invitational, High Scorer Award
Bash at the Beach, Finalist

2015 RECYCLE RUSH™

**FIRST Championship Carson Division Semifinalist**
**FIRST Championship Carson Division, Safety Star of the Day**
**FIRST New England Regional Chairman’s Award**
**FIRST Rhode Island District Chairman’s Award**
**FIRST Waterbury District Finalist**
**FIRST Waterbury District Team Spirit Award**
Where Is Wolcott Invitational, Best Design Award

2014 AERIAL ASSIST™

**FIRST Championship Galileo Division Semifinalist**
**FIRST New England Regional Finalist, 3rd Seed**
**FIRST New England Regional Judges Award**
**FIRST Hartford District Winner, 1st Seed**
**FIRST Southington District Chairman’s Award**
**FIRST Southington District Winner, 11th Seed**
**FIRST Southington District Industrial Safety Award**
**FIRST Groton District Industrial Safety Award**
**FIRST Groton District 12th Seed**
CAS/CIAC Connecticut State Championship – Winner, 1st Seed
Where Is Wolcott Invitational, Finalist & Best Design Award

2013 ULTIMATE ASCENT™

**CAS/CIAC Connecticut State Championship – Winner, 1st Seed**
**FIRST WPI Regional Semifinalist, 4th Seed**
**FIRST WPI Regional Creativity Award**
**FIRST WPI Regional, Safety Star of the Day**
Where Is Wolcott Invitational, Finalist

2012 REBOUND RUMBLE™

**FIRST WPI Regional Quarterfinalist, 15th Seed**
**FIRST Connecticut Regional Finalist, 10th Seed**
Where Is Wolcott Invitational, Finalist

2011 LOGO MOTION™

**FIRST Connecticut Regional Quarterfinalist, 17th Seed**
**FIRST Connecticut Regional Dean’s List Finalist (Rohit Grover)**

2010 BREAKAWAY™

**FIRST Championship Newton Division, Ranked 38th/87**
**FIRST Connecticut Regional Quarterfinalist**
**FIRST Connecticut Regional Engineering Inspiration Award**

2009 LUNACY®

**FIRST Championship Archimedes Division, Ranked 39th/87**
**FIRST Connecticut Regional Judges’ Award**

2008 FIRST OVERDRIVE™

**FIRST Connecticut Regional Gracious Professionalism® Award**
**FIRST Connecticut Regional Woodie Flowers Finalist Award awarded to Mentor Ernie Smoker**
**FIRST Connecticut Regional Safety Token Award, Runner Up**

2007 BACK ‘N’ ROLL™

**FIRST Championship Curie Division, Quarterfinalist, Ranked 37th/86**
**FIRST Connecticut Regional, Winner, 25th Seed**
**FIRST Connecticut Regional Team Spirit Award**
Bash at the Beach, Best Human Player Award & Most Photogenic Award

2006 AIM HIGH™ and 2005 TRIPLE PLAY™

2006 FIRST New England Regional, 13th Seed
2006 FIRST New England Regional Imagery Award
2005 FIRST New England Regional, Finalist, 22nd Seed
Interested in becoming a sponsor?
Help us to inspire the next generation of scientists, engineers and caring citizens! The Elm City Robo Squad Program is seeking your financial help in sustaining a program that is proven to motivate young men and women to achieve their dreams. Your financial contribution will help us to continue this important work! Please consider contributing to the Elm City Robo Squad program. Help us to build a brighter future for our students. Becoming a sponsor is easy! Whether it’s a monetary donation, extra tools or supplies, or just simply a helping hand, we would be happy to hear from you. Please contact us at:

Elm City Robo Squad
Hill Regional Career High School
140 Legion Avenue
New Haven, CT 06519

Alberta Vitale, Mentor/Steering Committee Member
Phone: 203-693-1558
email: elmcityrobosquad@gmail.com
www.elmcityrobosquad.org

Sponsorship Levels
Elm City Robo Squad has many levels of sponsorship (outlined below). Please consider joining the ranks of our corporate sponsors Yale University, United Illuminating, United Technologies, Best Buy Foundation, Comcast NBCUniversal, Hill Regional Career High School, Parker Hannifin Corporation, National Instruments, Walmart Foundation, Svigals + Partners, Frederick A. DeLuca Foundation and Community Foundation for Greater New Haven, at one of the following levels:

**Platinum Sponsor**
Donates $5000+ to our team. A founding sponsor or donation of $5000+ to our team. All Platinum Sponsors will have all the perks of a Gold Sponsor, with the addition of having their company logo appear prominently on our website, robots, team shirts, pit banners, and other team materials, as well as included in the official team name, and announced when the team is introduced or receives awards.

**Gold Sponsor**
Donates $2000-$4999 to our team. All Gold Sponsors will have all the perks of a Silver Sponsor, with the addition of having their company logo appear on both our robot and on our team shirts.

**Silver Sponsor**
Donates $500-$1999 to our team. All Silver Sponsors will have all the perks of a Bronze Sponsor, with the addition of having their company name appear on our robot.

**Bronze Sponsor**
Donates $100-$499 to our team. All Bronze Sponsors will be listed on the sponsors’ page on our website and in our pit display.

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M ENTORSHIP

Our Current Mentors

Cynthia Scheetz
Ernest Smoker
Clifford Branzell
Justin Foss
Andrew Morrison
Alan DiCicco
Makenna Calabrese
Donald Thomas
Alberta Vitale
Steven Reitsma
Sam Lipscomb
Gabe Lapietra
Brendan Clifford
Bill Mendoza
Josh Miller
Emily Chu
Richard Vogl
Peggy Thomas
Kris Seluga
Eric Scheuing
Vishal Patel
Eric Sheuing
Ben Taylor

About Mentoring and Volunteering

We welcome new engineering mentors to help guide our students to design and build robots. And new non-engineering mentors are welcome to teach associated business skills to our students, including fundraising, marketing and branding. We also welcome volunteers that can provide lunches and dinners to us during our long evening and Saturday work sessions. Our volunteer hours are flexible. Some volunteer several evenings a week, others a couple times a month. No amount is too small. During our robotics build season, January through April, our typical schedule is:

Monday  3pm - 8pm
Tuesday  3pm - 8pm
Wednesday 3pm - 8pm
Thursday 3pm - 8pm
Friday  3pm - 8pm
Saturday 8am - 4pm
The Design and Build Experience
Each year we build a robot. We receive a new unique challenge from FIRST and we have six weeks to build a robot according to the challenge. Six weeks of high intensity work with a hard stop. Planning and thinking. Assigning tasks. Applying formulas and knowledge. Arguing and collaborating. Trusting and challenging one another. Trial and error. Success and failure. Experiential learning.

The challenge begins in January with the build ending in mid-February. Competitions begin about a week later. Re-engineering and redesign in a time-limited format follows through the 8-week competition season that culminates at World Championship in April. Most recently, Elm City Robo Squad attended FIRST World Championship in April 2014, 2015 and 2016 in St. Louis, Missouri, finishing as a semifinalist in its division in 2014 and 2015, and as finalists in 2016.